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CONTENTS

MEETINGS AND LECTURES

16th October

2.15 p.m. Allied Societies Conference.
5 p.m. Council.

17th October

11 a.m. Joint meeting of the Council and the Allied Societies.

ARCHITECTURAL SCIENCE BOARD LECTURES

FOR THE SESSION NOVEMBER 1945—JUNE 1946

The Architectural Science Board has arranged the following series of lectures for the Session November 1945 to June 1946.

The lectures will take place at *5.45 p.m. at the R.I.B.A., 66 Portland Place, London, W.1.*

Wednesday, 7 November: Joint Meeting with the Institution of Structural Engineers. Lecture on "The Construction of an Underground Factory," by Mr. H. V. Lobb [*F.*].

Wednesday, 5 December: "Painting: An exposition of the Ministry of Works Study Report No. 5," by Mr. James Laurance, with an introduction by Dr. L. A. Jordan (Paint Research Station).

Wednesday, 2 January: "Plastering," by Dr. H. Andrew (Building Research Station).

Wednesday, 6 February: "Painting Plastered Surfaces," by Mr. H. M. Llewellyn (Building Research Station).

Wednesday, 6 March: "Building Research," by Professor J. D. Bernal, M.A., F.R.S.

Wednesday, 3 April: "Colour in Building," by Mr. William Allen [*A.*] (Building Research Station).

Wednesday, 1 May: "The Relationship of Air Photographs to Architecture and Town Planning," by Mr. Frank Scarlett, B.A. [*F.*].

Wednesday, 5 June: "Sociology in Architecture," by a member of Study Group No. 1 of the Architectural Science Board.

To develop the discussions which take place at the lectures, it has been decided to print the papers for circulation before the date on which they are to be given. Copies of the lectures may be obtained two weeks before they are due to be delivered on application to the R.I.B.A. Librarian-Editor, 66 Portland Place, W.1. A register will be kept at the R.I.B.A. of those who ask for copies of lectures or who express themselves interested in any particular lecture.

In addition, announcements giving synopses of the various lectures will be published from time to time in the R.I.B.A. JOURNAL and the professional press.

Journal

ARCHITECTS AND RECONSTRUCTION

The Council of the Royal Institute of British Architects have authorised the publication of a memorandum dealing with questions affecting the employment and status of architects engaged upon the design and construction of public building works.

The great tasks of new housing and reconstruction to be carried out in unprecedented circumstances must entail immense activity in the building industry. For many years the Institute has initiated action in a desire to impress upon the public the need for employing qualified architects if the creation of good architecture and sound building throughout the country is to be assured. The Royal Institute of British Architects is continuing to do all in its power to make possible the achievement of this objective and, in an endeavour to utilise, to the utmost, all the available resources of the profession, consideration has been given to the methods adopted by public bodies for dealing with architectural building undertaken by them. A small committee under the chairmanship of the President, and representing equally the two broad classes of membership of the Institute, viz., architects in private practice and architects holding official appointments, have now completed a memorandum which was submitted to the Council in July, 1945.

The Council has approved the memorandum and authorised its publication as the policy of the Institute and in particular as a guide to the President or other honorary officers in advising government and local government authorities in connection with the employment of architects.

The memorandum follows.

24 August 1945.

THE EMPLOYMENT OF THE ARCHITECT ON PUBLIC WORK

The creative work of the architect is essential to the carrying out of any project which concerns the housing or environment of human life and its activities. His architectural and technical training enable him to plan the structure and equipment of his scheme as an economical whole; to select and use appropriate materials with skill in the execution of well-proportioned designs.

In supervising large projects his wide knowledge of the technique of planning and design place him in an unchallengeable position to co-ordinate the contributions of all who have specialised in one or other of the many technical aspects of the building industry.

His patrons have changed in successive centuries with the progress of social conditions. Church and State, the aristocrat and wealthy landowner, commerce and industry, the institution and the private individual have now all been overshadowed by the growing patronage of the ordinary man who, collectively, is providing the public funds from which the great works of reconstruction and rehabilitation will be financed.

In many of the United States of America, some parts of the British Commonwealth and in most countries in Europe, the State law provides that a qualified architect is necessary for the supervision of all but the least important structures. This is a recognition of his comprehensive knowledge, not only of structure and design, but of the whole fabric of the building industry and of building procedure. It recognises also his professional concern with the needs and well-being of those who will live and work within the completed building and its surroundings. The professional standing of the architect is at its highest in these circumstances.

The position in this country lacks legal safeguard, although most public bodies of any importance employ architects for their housing and public enterprise. In many cases the architect is retained as a salaried official; in some cases he is called in as a private practitioner; and in such cases he is regarded as the professional co-ordinator.

There are, however, some authorities who continue to encourage a divided responsibility amongst their technical experts. Their schemes are thus brought to completion without the wide co-ordinating supervision of the qualified architect, whose authority would ensure technical, economic and æsthetic balance in the result. It is not realised that the employment of qualified assistant architects to work under another specialist official cannot take the place of the independent architect who is directly responsible to his employer—the public authority itself. The architect in such conditions still remains to them an exterior decorator with a possibly fortuitous facility for interior planning. The final disposal of such reasoning lies in the world-wide recognition of the social contribution made by earlier English housing schemes, initiated just before and shortly after the turn of the century and carried out by British architects many years before the more ambitious examples from Europe.

A further and equally fallacious argument is that which places the architect in the category of an expensive luxury, his fees merely adding to the cost of the scheme. Plans, working drawings, specifications and building supervision must, in any case, be paid for, whether they are undertaken by a private architect or by a department directed by an architect working as a salaried official. In the one case these costs are paid as a percentage on the cost of the work, and in the other as a previously agreed salary with normal overhead charges. It is, however, the quality of the work which governs the ultimate cost, and such cost must be calculated over the life period of the scheme. The cost of competent architectural supervision in all stages of the work is thus more than justified by ultimate saving in maintenance and repair costs.

The appreciation bestowed upon our housing schemes is known to spring from consideration of two factors: high quality and low cost, both of which have been secured by the professional competence of the architect.

The discussion, therefore, turns upon the allocation of work amongst qualified architects, as salaried officials or private practitioners.

The Committee is of opinion that the position with regard to employment of private architects or salaried staff under the direction of a qualified architect will depend largely on the convenience and economic circumstances of the employing authority.

(*a*) For an authority needing the services of an architect intermittently, the reasonable course is to employ qualified private practitioners.

(*b*) Where the volume of work of a public authority is continuous, it is economically sound policy to employ salaried architectural staff provided it is directed by a properly qualified architect.

(*c*) In cases where salaried staffs are employed, it is inevitable that there will be periods of great pressure and it is felt that this position can best be met by calling on the services of the private practitioner rather than by temporary increases of staff.

(*d*) It is also desirable that official architects should encourage their authorities to employ and consult specialists by the institution of competitions or otherwise, in cases where works and buildings of a specialist character are proposed.

(*e*) It is essential that when private architects are employed they should be responsible for the contracts they control, but it is desirable also that they should work in the closest collaboration with and under the general direction of the principal architect of the authority concerned.

POST-WAR EMPLOYMENT: R.I.B.A. CARD INDEX

The R.I.B.A. Card Index is now available for use in connection with post-war employment, and the Institute will welcome notifications of architectural vacancies of every kind.

The Card Index has been compiled from the information received on Questionnaires "A" and "B" which the architectural profession generally has completed and sent in to the Institute. In addition to the names of architects fully qualified as Fellows, Associates or Licentiates of the R.I.B.A., or otherwise, who require responsible posts, the Index contains particulars of Students and Probationers of the R.I.B.A. and others who are seeking posts as assistants.

Enquiries should be sent to the Secretary, R.I.B.A., 66 Portland Place, London, W.1, giving a description of the vacant post with details of the age and salary range, the locality of employment and particulars of such qualifications and special experience as may be considered essential. The R.I.B.A. will then put intending employers into touch with suitable applicants who are immediately or about to become available for employment.

THE LIBRARY AND SERVING MEMBERS' NEEDS

Some members in the Forces still seem unaware that the library is sending books on loan overseas to men in B.A.O.R., C.M.F. and M.E.F. Loans are made for a long enough period to allow for transit and to give the recipient a good time to read the books; and there are the same opportunities for renewal, as in the case of normal inland loans.

A special display has been made in the Library of books and pamphlets of special interest to members returning from war service.

DIGEST OF WAR-TIME LEGISLATION

Inset with this issue of the Journal is the Digest of War-time Legislation,* prepared by Mr. Charles Woodward [*A.*], with special regard to the needs of members returning to professional life from war service. Members who receive it now will be doing a good service to any of their colleagues who may fail to receive the Journal by letting them know of it so that they can apply for a free copy to the R.I.B.A. It is not proposed to issue a series of separate guides since all current legislation is being abstracted by Mr. Woodward in the Practice Notes columns of the Journal. Non-members can purchase the guide from the R.I.B.A. at the price of half-a-crown, post free.

*Digest of War-time Legislation of interest to Architects, by Charles Woodward, A.R.I.B.A. 4to. 16 pp. 1945. 2s. 6d.

FIRE GRADING OF BUILDINGS

By R. C. BEVAN, M.A., B.Sc.

A Paper read at a meeting held on 25th April, organised by the Architectural Science Board.

Before coming to the real subject-matter of my talk, I want to say a few words about the title—"Fire Grading." I think that the expression first appeared in the report of the Committee on the amendment of the London Building Act, which was published in 1934, and in which the term "fire grading" was used in the sense of specifying grades of fire resistance as defined in B.S. 476 for use in the construction of buildings. I shall use the term in a rather wider sense, to mean the grading of fire precautions in buildings so far as they concern the construction and planning of buildings and their fire-fighting equipment, to afford an adequate standard of safety against fire, "grading" being used in the sense of balancing the precautions to meet the particular hazard. In that the equipment of our fire-fighting services is not included.

The object of fire grading is to give the architect and others concerned with the safety of people and the safety of property the data required to ensure that a building is satisfactory from the fire protection standpoint. It is by no means a new problem, for it dates back to the earliest days of urban development. The first effort which bears any resemblance to present-day practice is the ancestor of many modern building regulations, the London Building Act of 1667, which followed the Great Fire. Fire precautions, of course, were very much to the fore in that Act; but because of the limited range of building materials and the limited range of methods which were then available, they were confined to brick, stone, tile, slates and timber, and because the buildings were used for relatively few purposes, the problem then was, technically, a fairly simple one. To-day there is an almost infinite variety of building materials and methods, and an equal variety of fire risks, ranging from the backyard hut to the departmental store. I include the backyard hut advisedly, because it can form a serious fire risk.

In dealing with fire grading, we have to consider the buildings and the occupancies not only in the broad sense, but in detail, and in that respect the problem involves almost every item in a building, the walls, floors, roofs, the height of the building, its floor area and the cubic capacity of the building, internal planning, the layout on the site, ending finally in town planning. It is a very complex problem, and if hardships are to be avoided there can be no simple solution.

In this talk I can give you only the bare outlines. In due course the report of the Joint Committee of the Building Research Board and the Fire Offices' Committee on this subject will be published. I cannot anticipate their findings, but that report will, of course, treat the subject in rather greater detail.

There is one other point which I should like to emphasise, and that is that fire grading is concerned with the establishment of standards. How those standards are attained is not a matter of immediate concern; that is for further consideration.

Fire Hazard and Fire Precautions

There are two basic items which fall to be considered: on the one hand the fire hazard, and on the other, the fire precautions which must be taken to minimise that hazard. As the title implies, we have to balance or grade the precautions against the fire hazard to attain a good standard of safety.

First of all, we must appreciate what fire hazard is. It is not a simple quantity which can be measured in pounds or inches or degrees. For the purpose of analysis, I always find it helpful to consider the fire hazard of any building under three heads which in order of importance are: (1) the fire hazard to the occupants of the building; (2) the hazard to the surrounding property; and (3) the hazard to the structure and its contents.

By separating them in this way it may help to make clear that precautions in respect of, say, the structure and contents are not necessarily adequate from the life safety standpoint, and *vice versa*; nor may they be adequate from the standpoint of the adjoining buildings. An instance of this distinction occurred in America, where in a building of fire-resisting construction several hundreds of people lost their lives in a few minutes after a fire started. Of course, when considering the formulation of a code of practice or building regulations, the whole must be made into one complete code; but it is convenient, when studying the problem, to consider each section individually.

Before the precautions required in any particular case can be determined we must know what the extent of the fire hazard is. To take an analogy, a building cannot be designed structurally until the loads are known. The order of importance is not always the most convenient for analysis, and I propose to start with the last one in order of importance, i.e., the hazard as it affects the structure and the contents.

Classification of Occupancies

With the very wide range of occupancies, the first task is to attempt some classification from the standpoint of structure and contents. There are many ways in which occupancies have been classified for this purpose. A common one in this country is domestic, trade and manufacturing, and warehouse, but the modern basis is by means of what is known as fire load. The fire load of an occupancy is merely the load of combustible material in the building per sq. ft. of floor area, including both its contents and any parts of the construction which may be combustible. Just as floor loads for different occupancies have been tabulated, 30 lb./sq. ft. for the small dwelling, 80 lb./sq. ft. for shops, etc., so corresponding fire loadings for different occupancies can be quoted.

The fire load can be expressed in pounds per square foot, but it should be related to the calorific value of the contents, and it is more accurate to express it in terms of the amount of heat which can be liberated by the complete combustion of the fire load, usually in B.Th.U. per square foot. It is important to note that the fire load bears little or no relation to the floor load used in design. Offices may be designed for a floor load of 50 lb./sq. ft., but the fire load is only of the order of 10 lb./sq. ft. The floor load, therefore, must not be taken as a measure of the fire load. At the present time few data on fire loads are available, but sufficient is known to enable a tentative classification to be given.

The numerical value of the fire load is, however, not the only factor that enters. Obviously there is a very great difference between two fire loads, for example, a fire load of 100,000 B.Th.U./sq. ft. of petrol, and a fire load of 100,000 B.Th.U./sq. ft. of heavy timber, which is not taken into account by the numerical value. That difference represents what is usually called the degree of hazard or the chance of an outbreak occurring, which is clearly greater in the case of petrol than timber. Unfortunately that degree of hazard cannot be expressed in any

definite terms. Steps are being taken in that direction, but for practical purposes, at any rate for the time being, it must be expressed in a qualitative way, and reliance must be placed largely on experience and on the general knowledge of the combustible properties of different types of material. There is again a very great difference in fire hazard between, say, a fire load of wood shavings and a fire load of heavy timber. In addition to the mere numerical value of the fire load, therefore, a number of other factors must be taken into account ; but the fire load is a first step in the right direction of providing a scientific basis of measurement. There are, however, these other factors, and no doubt it will be possible in future to express them in rather more definite terms.

The importance of this conception of fire load, which was first put into practical terms in America some years ago, lies in the fact that it does give us some indication of the kind of fire which is likely to occur. It will be seen how useful that knowledge is from the point of view of design in a later part of this talk.

Personal Hazard

The above classification by fire load is concerned mainly with the contents and the combustible material generally in the building. In respect of the question of personal hazard it will be clear that any classification of occupancies must be considered from a different standpoint. A warehouse will carry a heavy fire load, but from the life risk standpoint there is usually little cause for concern, because there will be only a few people in it, and they will usually be able-bodied. On the other hand, a hospital has a light fire load, but if a fire broke out in a hospital there would be greater danger to the patients, which would depend broadly on their physical condition, numbers and how they are disposed within the building. Therefore, when considering the grading of occupancies from the aspect of life safety, we must take into account not only the characteristics of the fire load but the characteristics of the population, the chief of which are their physical condition, with which we may associate age, total population and density of population.

It is quite customary to grade buildings according to the number of square feet occupied per person. The figures vary considerably in different building codes, so that there are obvious differences of opinion as to what they should be. [Those adopted in the Canadian Building Code are given in Table 1.] In London I believe that the figures for concert halls (which I suppose would come in the first group indicated in Table 1) is 5 sq. ft. per person, and for restaurants 12 sq. ft., as against the 40 sq. ft. shown in this table. Those figures, I imagine, are largely based on opinion, and I cannot offer any other reason for these great differences. Considered in conjunction with the size of the building, the figures give the total population, and the means of escape must provide for that population to be evacuated in a certain time.

Ideally, from the design point of view there should be a grouping of occupancies both from the fire load standpoint and from the population standpoint.

Exposure Hazard

That leaves the question of exposure hazard. The first two divisions—the contents and the safety of life—are concerned mainly with the inside of the building ; as exposure hazard is concerned with conditions outside the building, it is proposed to leave this question until later in this talk.

Fire Precautions

Having dealt with the question of estimating fire hazard, the next step is to consider the precautions which must be taken to meet those hazards. It will be assumed, of course, that fire fighting is always available, but, apart from that, fire precautions in any building can be divided broadly into construction and planning, and fire extinguishing equipment.

The first item to take is the basic construction of the building. In this country the practice has been, broadly, to consider building constructions in three groups : the fire-resisting building, the brick-and-timber or ordinary building, and the unprotected building.

It should be appreciated that " fire-resisting " and " incombustible " are two distinct terms. Fire resistance is the property of a wall, column, or beam, or any other part of a structure, which enables it to function satisfactorily for a period during a fire ; combustibility is merely a property of a material, that is to say, of course, whether it burns or not. An element of structure may be combustible and yet have good fire resistance—possibly a higher fire resistance than an incombustible element. A convenient way of distinguishing the two properties is to remember that fire resistance is measured in terms of hours of satisfactory behaviour under certain standard conditions.

Considering first the fire resisting group, it has been customary in the past to lay down certain specific requirements for fire resisting buildings, but from Figs. 1 and 2 it will be clear that what is required will depend on the fire load. Fig. 1 shows what was a floor in a warehouse which has been completely burnt out. Fig. 2 shows a similar type of floor in a lightly-loaded factory. It has been damaged, but as a fire stop, and for supporting the load, it was still satisfactory. From the fire resistance point of view that floor functioned as a fire resisting floor. The reason for the difference in the behaviour of the two floors is that, in the

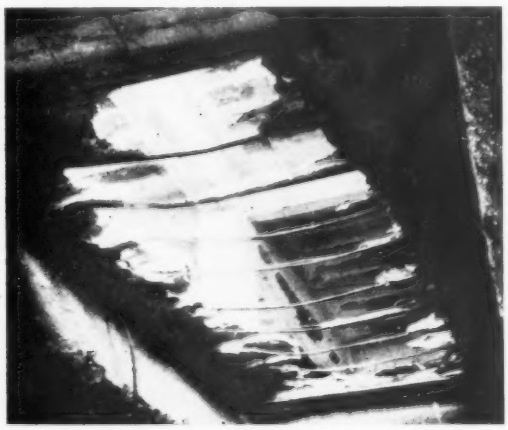

Fig. 1.

Fig. 2.

TABLE 1

MAXIMUM AREA OF FLOOR SPACE PER PERSON TO BE ASSUMED IN DETERMINING THE NUMBER OF PERSONS TO BE ACCOMMODATED BY EXITS

Occupancy	Maximum Area of Floor Space per Person, in Square Feet
Arenas, Auditoriums, Churches, Dance Halls, Exhibition Buildings, Lodge Rooms, Passenger Stations, *Theatres*, and similar *places of assembly* (see paragraph below)	15
Libraries, Schools, Courtrooms, Museums, and similar occupancies; ***Restaurants***	40
Stores; Street floor and sales basement	30
Other floors	60
Offices, Factories, and Workrooms, *Stages* and "Back-stage" Areas	100
Hotels and Apartment Houses	125
Institutional Buildings	150
Warehouses, *Garages*, Storage Buildings ..	300

one case, the fire load was heavy and in the other case it was much less.

In B.S. 476, which deals with the measurement of fire resistance, elements of structure are graded according to the time in hours for which they resist certain standard conditions of fire load and water. To make proper use of those data, i.e. to know when to use elements of structure of one-hour or two-hours fire resistance, the relation between the test conditions and fires in buildings having different fire loads must be known. The necessary link is provided by some occupancy tests carried out in America. In those tests, various weights of timber and paper were set alight in a specially-constructed brick chamber, and the temperature conditions measured throughout the complete burning of the contents.

The results are shown in Table 2. The left-hand column shows the weight of furniture and combustible material expressed in lb. per sq. ft. of floor area ; the middle column, the calorific content per sq. ft. which is related to Table 1 by the calorific value of paper and timber, about 8,000 B.Th.U. per lb. In the third column it will be seen that the combustion of 10 lb. per sq. ft. of combustible material is approximately equivalent to

TABLE 2

Combustible Contents (weight of furniture, flooring, etc.)	Approx. B.Th.U. content	Maximum fire hazard (destructive effect equivalent to standard fire test)
lb. per sq. ft.	per sq. ft.	hours
10	80,000	1
15	120,000	1½
20	160,000	2
30	240,000	3
40	320,000	4½
50	380,000	6
60	432,000	7½

1 hour exposure in the British Standard fire test, 15 lb. per sq. ft. to 1½ hours, 20 lb. to 2 hours and so on. These figures mean that in a building where the fire load is of the order of 10 lb. per sq. ft. giving a fire load of 80,000 B.Th.U./sq. ft. elements of structure which had a fire resistance of 1 hour would be expected to withstand the complete burn-out of those contents without failure.

The fire resisting group in the original grouping of types of construction, therefore, must be divided up to cater for the different fire loads if regard is to be paid to economy in construction. The provision of 2 hr. fire resistance in a building where 1 hr. fire resistance is adequate would usually entail use of additional protection which would serve no useful purpose. In Table 3 an American suggestion* is shown for fire grading the different elements of structure according to the weight of combustible materials in the building. The reference to Type I is merely a classification number, indicating buildings which are fully fire resisting. It is sub-divided into Types I *a* to I *f*. The second row indicates the fire resistance of the various elements as determined from the weights of combustible material corresponding to the figures in Table 1. Below fire resistances for different elements of structure in each fire load category are given.

Considering only the lower half of this table, from "Exterior walls" to the end, it will be noted that the exterior walls have a fire resistance of 4, 3, 2, 1½ and 1 for the respective fire loads. The fire resistance for a fire load of 20 lb. per sq. ft. is 2 hours.

TABLE 3

MINIMUM FIRE-RESISTANCE RATINGS OF STRUCTURAL ELEMENTS FOR TYPE I CONSTRUCTION

Subtype	I-A	I-B	I-C	I-D	I-E	I-F
General fire-resistance rating in hours	Over 4	4	3	2	1½	1
Weight of combustibles. lb ft² of floor area	Over 35	35	30	20	15	10
Exterior walls—outside exposure:						
Distance from common property-line or other buildings on the same property:						
Under 10 ft. (including common-property-line walls)	*hr.* 2	*hr.* 2	*hr.* 2	*hr.* 2	*hr.* 2	*hr.* 2
From 10 to 20 ft.	1½	1½	1½	1½	1½	1½
More than 20 ft.	1	1	1	1	1	1
Exterior walls—inside exposure .	(a)	4	3	2	1½	1
Interior bearing walls	(a)	4	3	2	1½	1
Columns, girders, trusses ..	(a)	4	3	2	1½	1
Floor construction	(a)	4	3	2	1½	1
Roof construction [b]	(a)	4	3	2	1½	1
Fire walls, fire division walls, and party walls [c]	(a)	4	3	2	2	2
Fire-resistive partitions	1	1	1	1	1	1
Interior partitions [d] enclosing:						
Public hallways	1	1	1	1	1	1
Public stairways and other vertical openings	2	2	2	2	1½	1
Other permanent partitions ..	(e)	(e)	(e)	(e)	(e)	(e)

Note. The footnotes to which the index letters in Tables 3 - 5 apply have not been reproduced,

The reduction which we see for the interior partitions is probably based on rather different considerations. They are mainly concerned with the safety of people, and as in most cases the occupants of a building would be out of it in a very much shorter time than would be necessary to cause the collapse of a 1-hour fire-resistant partition it is possible to make a reduction there. But the main feature in this Table is the fact that the fire resistance of the elements of the structure is graded according to the fire load of a building.

This has very important implications in buildings. Its application to practice would remove the objections which were often raised to the somewhat onerous requirements imposed both in this country and abroad for a construction to be described as fire-resisting. Although the table is taken from American

* *U.S. Dept. of Commerce, National Bureau of Standards, Building Materials and Structures Report BMS 92.*

sources the first building regulations in which this principle was adopted were published by the London County Council just before the war in connection with the protection of structural steelwork.

Thus by relating fire resistance requirements to fire load, the fire resisting type of construction may be divided into a number of different sub-grades, each of which is nevertheless fully fire-resisting for its particular fire load.

The next group includes the brick-and-timber building. That is defined by the materials of which it is constructed; but, to fall in line with the modern trend of defining the requirements by standards rather than by the actual materials of which the building is constructed, it should be noted that this class of structure has external walls of a high grade of fire resistance and an internal structure of more or less negligible resistance; in fact, the timber floor as commonly used does not fall within any of the grades of the British Standard 476, 1932. All buildings of this type and they include probably a very large number of buildings in this country—may therefore be classified under a generic grade defined by external walls of a high grade of fire resistance and internally none.

Finally, we have the unprotected structure, in which none of the elements of structure have a grade of fire resistance as specified in the British Standard.

That grouping is one of many possible ones, but it has this characteristic. In the first class we have buildings in which all the main elements of structure have a specified grade of fire resistance. In the next type, only the external walls have a specified grade of fire resistance. Lastly, there is the unprotected category in which none of the structure has a specified grade of resistance. A more detailed classification is possible. A building of combustible construction may have a fire resistance equal to that of one of incombustible construction, although there are very obvious differences between the two. We could sub-

TABLE 4

MAXIMUM PERMISSIBLE HEIGHTS OF BUILDINGS FOR A GIVEN OCCUPANCY CLASSIFICATION
Note: The more restrictive requirement, either *height* in feet or in *storeys*, shall govern

Occupancy Group		Division of Occupancy Group (See Art 4.2.1 for full details)	Types of Construction						
			1A Fire Resistive	1B Fire Resistive	1C Fire Resistive	2 Heavy Timber	3 Masonry and Frame	4 Wood Frame	5 Unprotected Metal or Fire-retardant treated Wood
A	1	*Theatres* and *motion picture theatres*[d]	Unlimited	75 ft.[a]	45 ft.[a] 3 *storeys*	45 ft. 3 *storeys*	35 ft. 2 *storeys*	35 ft. 1 *storey*	35 ft. 1 *storey*
	2	Auditoriums, community halls, etc., including non-residential colleges and schools[e]	Unlimited	75 ft.[a]	55 ft.[a] 4 *storeys*	55 ft. 4 *storeys*[b]	45 ft. 3 *storeys*	35 ft. 1 *storey*	1 *storey*
B	1	Asylums, jails, etc.	Unlimited	75 ft.	- - - - - - - - - - - Not permitted - - - - - - - - - - -				
	2	Children's shelters, hospitals, etc.	Unlimited	75 ft.	45 ft. 3 *storeys*	45 ft. 3 *storeys*	35 ft. 2 *stroeys*	35 ft. 1 *storey*	1 *storey*
C	1	Dry-cleaning plants employing flammable or explosive solvents	1 *storey*	1 *storey*	- - - - - - - - - - - Not permitted - - - - - - - - - - -				
	2	High hazard industrial Occupancies	75 ft.[g]	75 ft.	45 ft. 3 *storeys*	45 ft. 3 *storeys*	35 ft. 2 *storeys*	25 ft. 1 *storey*	1 *storey*
	3	Medium hazard industrial and commercial occupancies excluding office buildings	Unlimited	75 ft.	75 ft.[e]	55 ft. 4 *storeys*	45 ft. 3 *storeys*	35 ft. 2 *storeys*	1 *storey*
		Office buildings	Unlimited	Unlimited	75 ft.	75 ft.	55 ft. 4 *storeys*	35 ft. 2 *storeys*	1 *storey*
	4	Low hazard industrial Occupancies	Unlimited	Unlimited	75 ft.	75 ft.	55 ft. 4 *storeys*	35 ft. 2 *storeys*	1 *storey*
D	1	Convents, dormitories, etc.	Unlimited	Unlimited	55 ft. 4 *storeys*	55 ft.[b] 4 *storeys*	45 ft.[b] 3 *storeys*	35 ft. 1 *storey*	1 *storey*
	2	Apartment houses, *hotels*, etc.	Unlimited	Unlimited	75 ft.[e] 6 *storeys*	55 ft. 4 *storeys*	45 ft. 3 *storeys*	35 ft.[b] 2 *storeys*	1 *storey*
	3	*One-* and *two-family dwellings*	Unlimited	Unlimited	55 ft. 4 *storeys*	55 ft. 4 *storeys*	45 ft. 3 *storeys*	40 ft. 3 *storeys*	1 *storey*
E	1	Open sheds, *private* barns, *garages*, etc.	Unlimited	Unlimited	55 ft.	55 ft.	45 ft.	20 ft.	45 ft.
	2	Towers, water tanks	Unlimited	Unlimited	- - - - - - - - - - - - - - Unlimited - - - - - - - - - - - - - -				
	3	Stands and stadiums, etc.	Unlimited	Unlimited	55 ft.	55 ft.	45 ft.	35 ft[f]	45 ft.

divide all the groups into incombustible and combustible, but I do not propose to pursue this question of classification any further.

What I have tried to show you is how methods of building construction can be grouped according to the degree of resistance to fire, without making reference to the type of material that is used. The way is thus open to the use of any type of material, provided it is so used that the element of structure of which it is formed attains the required standard of fire resistance.

Limitation of Height and Size of Buildings

We have now, therefore, a grading of occupancies and a grading or grouping of buildings. The next step is to consider how we should fit any occupancy into any type of construction, and furthermore to define what other fire precautions should be taken to make up the standard of safety that we want. For example, suppose a building owner wishes to erect an office building 200 ft. high, and having a very large floor area, how should he build it? Should he build it in our second group or in unprotected? The answer is clearly that he should do neither; he should use fire-resisting construction. These considerations involve the rather controversial questions of the limits of height and limits of size of buildings which should be permitted from the fire protection standpoint for any combination of occupancy and type of construction.

Height Limitation

The objects of limiting the height of a building from the fire protection standpoint are mainly (1) to ensure that the people in it are not trapped in rooms at heights from which they could not be rescued by the fire services, and (2) to make sure that all parts of the building are within the range of attack on a fire.

From the standpoint of fire protection, it is not easy to justify applying a limit of height in the case of fire-resisting buildings. An important point is that the fire-resisting building can be designed so that there is no risk of collapse, and accordingly fire-fighting can be carried on more effectively from the inside than is possible in a building in which there is danger of collapse. In addition such buildings afford greater protection to the occupants and allow more time for escape. Possibly an exception should be made in the case of buildings containing large quantities of inflammable materials, but in such a case there is not likely to be the demand for height, which arises in other cases. Where, on the other hand, there is a risk of collapse, the height should be limited so that in an emergency, rescue is possible from the highest storey and every part of the building can be properly attacked from the outside.

That introduces the question of fire-fighting. There are many people who are better able to discuss that than I am, but I believe that in general hose streams from branches at ground level lose most of their efficiency at 50 ft. With modern turntable ladders it is possible to go up to 100 ft., but then other questions enter.

Those are a few of the factors which enter into this question of height limitation. As an example of the way in which the subject can be dealt with in a comprehensive fire code, the height limits adopted in the Canadian Building Code are shown in Table 4. This table also gives us an opportunity to see another method of grouping types of construction according to fire resistance and another method of grouping occupancies. Both are fairly self-evident classifications. For types of occupancy we have five main groups with various sub-divisions based largely on the personal hazard and sub-divided on the basis of structural hazard. The grouping of types of construction is to some extent similar to that which was discussed earlier. There are three groups of fire resisting construction, but, though it is not shown here, the grades of fire resistance in each of the types are somewhat different from those which are shown in Table 3. These are followed by a characteristic type of construction in America, the heavy timber building. "Masonry and frame" corresponds broadly to our brick-and-timber building; "wood frame" is the typical American timber construction; and finally there is the unprotected metal type with which is included fire retardant treated wood.

Where the construction is of Type I *a*, which generally has a fire resistance of 4 hours, no limit is placed on the height except in the case of the high-hazard industrial occupancies such as those to which I referred earlier. Dry-cleaning plant is, of course, a very special case. The next column shows a trend to the adoption of the fire-load principle, in that the height is not limited for buildings with a relatively low fire load, i.e., offices, hotels, etc. For the rest it may be noted that the heights range from 75 ft. down to 40 ft. for the wood frame construction and limited to a single storey in the case of the unprotected metal, which is the normal shed building. Such an arrangement is quite typical of many of the American codes.

It should, of course, be borne in mind that the fire-protection point of view is but one of the factors which enter into the question of height limitation. Requirements for town planning may be more restrictive, for although from the fire-protection standpoint no limit may be demanded, there may well be other factors which in practice limit the height to which the structure may be erected.

Size Limitation

This is a more difficult problem. The object of limiting the size of buildings, or the size of sections or divisions (as they are commonly called) of buildings, is to restrict the amount of property at risk and to restrict the size of the fire which may develop and thereby minimise the risk to adjoining property. It is not fully realised that the full benefits of fire-resisting construction cannot be obtained without proper sub-division, and in fact one might go so far as to say that fire-resisting construction is useless without proper sub-division.

The contents of the building are, of course, more often than not more valuable than the building itself, and ideally from the point of view of fire protection the smaller the sections into which the building is divided the smaller is the potential loss. On the other hand, we are faced with the difficulty that there are many occupancies which require, from the point of view of operating conditions, areas of many hundreds of thousands of square feet, and any limits above areas of that kind would have very little meaning in practice. Any code must therefore try to strike a balance between the needs of the industry and safety from fire.

The second important point that arises, the risk of spread of fire to other property, can be illustrated by considering the case of a large inflammable building in the desert, which would cause little worry to anybody but the owner himself. On the other hand, a building of that character in a densely built-up area would create very serious problems of fire spread. In other cases limitation may be desirable from the standpoint of personal safety. The subject is one which lacks any fundamental background, but, to illustrate how this problem is dealt with, the limits* applied in the Canadian Building Code are quoted in Table 5 as an example. This table is comparable with the previous one for height limitation, and sets out quite clearly what limits of floor area are allowed for any occupancy in any type of building. Again no limit is applied for the fully fire-resisting building, falling to 5,000 sq. ft. for the wood frame, but rising to unlimited again for the unprotected metal. That, of course, is a concession of the kind to which I have just referred: the unprotected metal building is usually a single-storey one and very large areas are often essential, *e.g.* in production lines. In many cases, however, it is possible to introduce suitable sub-division into those buildings without creating hindrance to trade, *e.g.* when used solely for storage.

These are the items which determine the salient features of any building in relation to any occupancy. I want now to say a few words about the question of the safety of occupants in relation

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** It will be noted that limitation by floor area is adopted, i.e. area of floor on any one storey. Authorities in this country often adopt cubic capacity of the whole building as the basis or both cubic capacity and floor area. This latter is perhaps the most accurate method.*

to any building. To some extent, as already noted, it is catered for in fixing the size and the height of the building; but the major feature of precautions from the life safety standpoint is means of escape. Clearly the various elements of a structure must have an adequate fire resistance, for the best means of escape would be rendered useless if collapse of the structure occurred. The necessary grade may, however, be much less than is necessary to resist a complete burn-out as indicated in Table 2, and a fire resistance of ½ hour would often be adequate. We saw earlier that the factors which need consideration are the population characteristics and the fire load characteristics, and they must be considered in relation to the type of building.

The common practice in designing means of escape is to adopt a basic unit of exit width, a certain rate of movement along corridors, through doorways, along staircases and to lay down a limiting distance to travel. The unit of width adopted varies in different codes from 18 in. to 22 in. The assumed rate of movement of crowds also varies, though a figure commonly adopted is 40 persons per minute for a unit of exit width, while in others it goes up as high as 60. The other factor, the limiting distance of travel from any point in the room to an exit, is again variable in different codes. Account is taken of the occupancy and the type of construction and the distance varies in different codes from 50 ft. in buildings with hazardous occupancies and inflammable construction to 150 ft. in the least hazardous cases. Those are merely a few of the basic items which are used for planning what exits are required. The solution of the problem and its application to building is a very complex subject, far too complex to be dealt with in a general paper of this kind.

Another vital factor is the question of smoke stopping. Lives are usually lost in fires by suffocation and smoke may spread throughout a building long before there is danger from fire.

TABLE 5

MAXIMUM PERMISSIBLE AREAS (SQ. FT.) OF BUILDINGS FOR A GIVEN OCCUPANCY CLASSIFICATION(a)

Note: Where seats are installed or moved into an *assembly building*, their number in any one room shall be limited as indicated in this table

Occupancy Group		Division of Occupancy Group (See Art. 4.2.1 for full details)	Types of Construction						
			1A Fire Resistive	1B Fire Resistive	1C Fire Resistive	2 Heavy Timber	3 Masonry and Frame	4 Wood Frame	5 Unprotected Metal or Fire-retardant treated Wood
A	1	*Theatres* and *motion picture theatres*	Unlimited	10,000(b) 1000 seats	10,000(b) 790 seats	7,500 500 seats	5,000 500 seats	3,000 300 seats	5,000 500 seats
	2	Auditoriums, community halls, etc., including non-residential schools, and colleges	Unlimited	20,000(b) 1500 seats	10,000(b) 1000 seats	10,000 750 seats	5,000 500 seats	3,000 300 seats	Unlimited(c)
B	1	Asylums, jails, etc.	Unlimited	25,000	Not permitted				
	2	Children's shelters, hospitals, etc.	Unlimited	25,000	10,000	10,000	5,000	3,000	Unlimited
C	1	Dry-cleaning plants employing flammable or explosive solvents or cleaners	Unlimited	25,000	Not permitted				
	2	High hazard industrial Occupancies	Unlimited	25,000	10,000	10,000	5,000	5,000(f)	5,000(d)
	3	Medium hazard industrial and commercial occupancies, excluding office buildings	Unlimited	25,000	10,000	10,000	5,000	5,000	Unlimited
		Office buildings	Unlimited	Unlimited	25,000	15,000	7,500	5,000	Unlimited
	4	Low hazard industrial occupancies	Unlimited	Unlimited	25,000	15,000	7,500	5,000	Unlimited
D	1	Convents, dormitories, etc.	Unlimited	Unlimited	20,000	12,000	5,000	5,000	Unlimited
	2	Apartment houses, *hotels*, etc.	Unlimited	Unlimited	25,000	15,000	5,000	5,000	Unlimited
	3	*One-* and *two-family dwellings*	Unlimited	Unlimited	25,000	15,000	5,000	5,000	Unlimited
E	1	*Private* barns and *garages*, etc.	Unlimited	Unlimited	25,000	10,000	5,000	5,000(e)	Unlimited
	2	Towers, water tanks	Unlimited	Unlimited	25,000	10,000	5,000	1,000	Unlimited(c)
	3	Stands and stadiums, etc.	Unlimited	Unlimited	25,000	15,000	5,500	3,000	Unlimited(c)

So far I have dealt very briefly with certain fundamental aspects. We have seen how it is possible to grade occupancies and types of building construction, relating them in respect of height and size, but that is perhaps only the beginning of the problem. We have still to consider the many items which go to form the complete system of fire protection. There are, for example, special provisions for high buildings. There are all the questions relating to accessibility for fire fighting both inside and outside the building, *e.g.* special staircases, the provision of adequate frontage on streets, etc., which involves questions of town planning, provisions with regard to staircases and basements, water supplies, fire-resisting doors and so on. It is quite impossible to deal with all these things here.

There is, however, one question which perhaps I ought to mention, namely, sprinklers. Sprinklers are a very effective means of extinguishing fires and are the only appliance which simultaneously gives an alarm and applies water to the source of the fire. American practice allows the size of buildings to be doubled if sprinklers are installed, *e.g.* where 10,000 sq. ft. would normally be allowed, an increase up to 20,000 sq. ft. is permissible when sprinklers are installed. Where the floor area is unlimited there is nominally no need for sprinklers, but in many codes there is a special provision that in all buildings in which combustible material is handled or stored sprinklers shall be installed when the floor area (and that refers to the area of any one floor) exceeds 10,000 sq. ft. In London most "excess cube" buildings, i.e. exceeding 250,000 sq. ft. are required to have sprinkler systems installed.

Exposure Hazard

In the time that remains I want to say a few words about exposure hazard, the last of the three groups of fire hazard. It is concerned, as mentioned earlier, with the risk of the spread of fires in built-up areas from building to building and across streets and backyards and other open spaces between buildings. Fundamentally, the best protection is obtained by the proper spacing of buildings, so that the fire cannot jump across streets. It introduces us into the field of town planning and it would be possible so to design and plan our cities that the risk of spread of fire was almost eliminated by that means. Other means of protection are, however, available and as in general—and this principle applies throughout fire protection—the most economic way of obtaining a certain standard of protection is by a combination of the three major methods, structure, plan, and fire-fighting, due regard must be paid to these alternative means. Nevertheless, town planning should be the first approach, and the provision of other amenities such as good daylighting, etc., which are obtained by good town planning automatically lead to better fire protection. An important fire problem arises out of the present trend to the "use zoning" of land, because it tends to a concentration of higher fire risks in certain zones. In the past we have had a haphazard mingling of houses and factories which led to a distribution of higher fire risks amongst a number of low ones. In these new developments, therefore, it is important to ensure that adequate fire protection is provided in those areas which contain the higher risks.

There still remain, however, very large areas of towns where reliance on structural methods, *e.g.* the protection of openings and fire fighting is still necessary. A rather important point arises in considering structural protection which up to now has not been of importance in this country, because brick and stone walls have been almost universally used and required under building acts and bye-laws. These afford a high grade of fire resistance but if lighter types of wall become more common, the risk of spread of fire not only through the window openings but also through the walls must be taken into account. Some provision for such walls and for the necessary protection will be found in the model bye-laws of the Ministry of Health.

When discussing Table 2 at an earlier stage, the top part of it was left for later consideration. Returning to this table a method is given of ensuring that walls of the lower grades of fire resistance do not increase the hazard from the standpoint of exposure. Where the external wall is less than 10 ft. from the common property line, a fire resistance of at least 2 hours is required against the risk of fire in an adjoining building. Where the distance of the wall from the property line is between 10 and 20 ft. a wall of a 1½-hour fire-resisting wall may be used, and if the distance is more than 20 ft. the wall can be of 1-hour fire resistance. It is clear that the lower grade of fire resistance is compensated by the increased space between the walls. We have therefore a requirement calling for a fire resistance against internal exposure of 4 hours and against external exposure of 2 hours. In the case of a solid brick wall, the 4-hour fire resistance would be the controlling one and the 2-hour requirement would automatically be satisfied, but with certain types of wall construction, *e.g.* a framed wall with separate internal and external leaves, it is possible for the wall to have two grades of fire resistance according to the side exposed to the fire. Each side should comply with the required standard.

There remain on this problem of exposure hazard all the details relating to the protection of openings by shutters, wired glass drenchers, etc. The provisions made in building codes are chiefly rule of thumb at the present time, but again it is hoped that some more fundamental basis for requirements will become available in future.

FORTHCOMING ARCHITECTURAL SCIENCE BOARD LECTURES

Members are reminded that the lectures for the next session will be held at 5.45 p.m. at the R.I.B.A. on the first Wednesday in each month, commencing on November 7, and concluding on June 5. Copies of the papers may be obtained in advance of the meetings on application to the R.I.B.A. Librarian-Editor, 66, Portland Place, London, W.1. There will also be announcements in the R.I.B.A. JOURNAL and the professional press giving synopses of the various lectures.

Application by throwing-on is the commonest method on the Continent for all rendered finishes. This difference in technique of application does not seem to be significant, but the nature of the mix and the method of surface finishing are.

EXTERNAL RENDERED FINISHES

By F. L. BRADY, M.Sc., A.R.I.C.

A Paper read at a meeting held on 20 June organised by the Architectural Science Board

The practice of covering the external surfaces of buildings of various kinds with some sort of plastic material capable of setting hard subsequently, has been in vogue since the earliest times. Sometimes this has been done primarily for protection, as in the wattle-and-daub huts of the natives of tropical countries, and on the wattle-and-daub panel-filling often used in English domestic work until a short time ago : sometimes it has been done for the purpose of decoration, or to cover masonry and brickwork of unattractive appearance : sometimes the rendering is applied to combine both functions, as when 9 in. common brickwork is so treated to-day. There are examples of rendering work dating from Roman times still in good condition, and in this country the practice of external rendering has been in use—more during some periods than others—since the Roman occupation, if not longer.

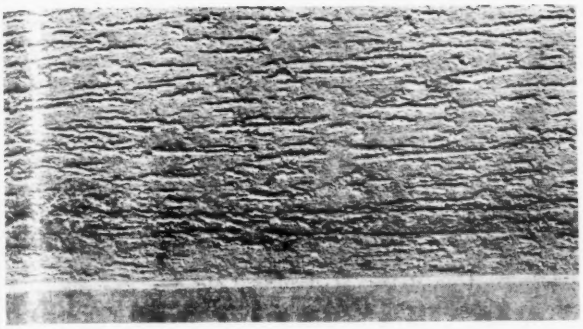
In spite of the centuries of experience in the application of rendered finishes in this country, it cannot be denied that to-day much of the work that is carried out is far from satisfactory. A common trouble is that, shortly after rendering, the surface develops a network of hair cracks. This not only completely spoils the appearance of the work, which is intended to present a clean, unbroken surface, but often creates a serious condition in the wall. It is not always realised that rain running down the wall face is quickly carried into the cracks by capillary action, where it is trapped, being prevented from evaporating by the rendering itself and causing damp to appear in the building. Hence a wall covered with a dense, but cracked, plaster may actually be less weatherproof than the bare wall would be. Troubles due to cracking of this kind are almost impossible to remedy otherwise than by re-plastering, and there is no certainty that a similar condition may not again develop.

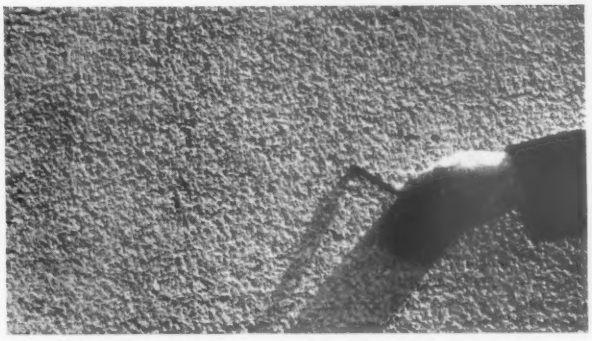
The appearance of modern rendered work also often leaves much to be desired, quite apart from defects due to cracking. Usually rendered work, when the plasterer leaves it, presents a clean attractive appearance, but, after a period varying according to the site and aspect of the work, irregularities in colour appear, due to the surface discolouring at varying rates. This is characteristic of work finished with a wood float, and close examination shows that the blemishes are due to differences in texture, inevitably produced during floating, some parts of the surface being more porous and absorptive than others. Buildings so plastered soon look shabby, and not as a result of rapid *general* discolouration, but because of differences in the *degree* of discolouration.

In this respect marked improvements have been effected by the growing practice of scraping stucco. This consists in removing from the rendering, a few hours after application, the surface skin in which the irregularities of texture exist. By this means a surface of uniform absorption is exposed which weathers evenly.

The problem of rendered finishes has received the attention of the Building Research Station for a number of years. More pressing problems have precluded any comprehensive and persistent study, though, from time to time, a number of experiments have been made. These have pointed to the desirability of a modification in the materials, and possibly also in the technique of application, in order to overcome the defects so prevalent to-day. In particular, the advantages of using a " weaker " rendering mix, as a means of minimising cracking, have been demonstrated.

The term " weaker " perhaps needs a little explanation. The typical rendering material used in this country is a mixture of cement and sand : undercoats generally consist of a mixture of ordinary Portland cement and sand in proportions varying from 1:2½ to 1:3½. Finishing coats are often modified by the substitution of white cement for grey, and the use of a clean, fine white sand. They are also often richer than the undercoats. Such mixes are capable of attaining a high degree of impermeability and a high strength. There is, however, reason to suppose that too high a strength, especially if associated with a tendency to contraction on drying, may be a disadvantage as promoting the formation of hair cracks, the effects of which, both æsthetic and structural, have already been described. This has been recognised by some plasterers who consider that air slaking of cement before use is advantageous. Prehydration of mortar is another process which has been suggested to accomplish the same object. A better method of producing a " weaker " mix is by blending cement with lime ; the latter may thus be regarded as diluting or extending the former. In experiments on the properties of such mortars it has been found that they are less





On Left. *An interesting texture produced by incorporating rounded pebbles in a rendering mix. When these are dragged along under a horizontal stroke of the float they produce the irregular grooves in the stucco.*
On Right. *The typical texture of scraped stucco.*

liable to shrinkage cracking on the wall. Of course, the typical rendering mix can be "weakened" by using less cement, but then there is the difficulty that the material is harsh working and difficult to apply. The incorporation of lime, by contrast, improves the plastering quality of the mix. The use of a more open textured rendering does not reduce the weatherproofness of the work, in fact, as has been pointed out, it is the rendering which consists of a dense coating with some hair cracks that is especially to be feared.

The Building Research Station proposed, when opportunity arose, to make a more complete investigation of rendering materials and craftsmanship with the idea of overcoming some of the difficulties experienced. Naturally work of this character, necessitating the provision of large areas of walling, and observation and testing over a period of years, would be both costly and tedious. It was known that experience with rendered finishes on the Continent was on the whole successful and that the materials used were different from those employed in this country. It therefore appeared that a study of the technique used abroad might materially accelerate the progress of the investigations, either by indicating directions in which favourable modifications of current practice might be made, or in permitting some types of material and finish which had already proved unsuitable, to be discarded at the outset. A programme of visits to a number of Continental countries was accordingly arranged. Three trade and professional associations and several commercial firms expressed interest in the proposals and promised contributions to the cost of the work.

The Director of Building Research decided that it was essential, if full advantage was to accrue from the survey, that an experienced plasterer should accompany the officers of the Station responsible for the work, in order that questions of craftsmanship and trade custom should receive full prominence. Arrangements were, therefore, made for a member of the National Association of Operative Plasterers, to accompany the officers of the Research Station. It is felt that the association of an experienced plasterer has materially assisted in securing a broad, comprehensive view of the work.

The survey included a number of centres in Germany, Switzerland, Austria, Czechoslavakia. Architects, building contractors, technical institutes, manufacturers and others, too numerous to mention here individually by name, freely contributed information and experience and provided facilities for the inspection of work in progress. The survey included capital cities, residential towns, and manufacturing towns, since it was considered important to know how the rendered finishes behaved, not only in places where the atmosphere was relatively pure, but also in polluted atmospheres, where the problem of producing a durable rendering which will maintain a good appearance is particularly difficult.

A film record was taken of the operations seen, in order to show, in the most effective manner possible, the technique of application, so that the methods used could be properly reproduced in this country if desired. The cinematograph record is far superior in many respects to written descriptions: for example, it has the merit of showing more effectively than words could do, the consistence of the mixes used, the mode of application and the subsequent treatment of the rendered surface.

One feature which is especially noteworthy is the practice of providing flashings or copings, properly weathered, to all projecting or horizontal surfaces. This practice is so thoroughly observed that string course, having a projection of not more than an inch, will have a small flashing of zinc. Parapets are always properly protected, either by a coping or a flashing of zinc or copper. The failure to observe this precaution is one of the chief causes of injury to rendering in this country. Any constructional or decorative feature which allows water to penetrate into the masonry behind a rendering is liable to cause harm. *It is likely that the need for flashing over minor projections is greater when soft, open textured lime renderings are used than with the denser and stronger cement renderings, but such protection will be beneficial whatever type of rendering is used.*

Continental practice differs from British in three main particulars:—

1. *Materials*

Cement is practically never used as the sole binding material in renderings; the exception to this rule is when a hard plinth is required, and it is interesting to note that then, as in this country, hair cracking is not uncommon.

The usual rendering material is a mixture of cement, lime and sand. Sometimes lime alone is used in undercoats, and then it is always of a moderately hydraulic or cementitious character. The proportions of lime, cement and sand vary, but the general conclusion derived from numerous discussions is that the mix is compounded substantially on the following basis:—The volume of cement used is about $\frac{1}{2}$ to $\frac{1}{4}$ of the volume of lime (measured either as putty or as a dry powdered hydrate) and the volume of cement + lime is $\frac{1}{3}$ that of the sand. Owing to the greater humidity in winter in this country it is advisable not to use too high a ratio of lime. For severely exposed work the mix should be 1:1:5-6 cement—lime—sand, while for only moderately exposed work a mixture of 1:2:8-9 would be strong enough.

Care is necessary in the selection of sand: earthy, loamy, or "soft" sands are avoided. Well-graded, gritty sands are preferred, and contractors are prepared to purchase sands from pits considerable distances away in order to get good material.

2. *Application*

All external renderings are "thrown-on" from the trowel, never "laid-on" according to the plastering technique customary in this country. The procedure with each coat applied is exactly that used in applying "roughcast." It is the opinion of Continental plasterers that the flinging of the plaster makes for good adhesion and uniformity of texture and reduces the risk of crazing. So far there is little evidence that the difference in

method of application greatly affects the results. The materials used and the method of finishing seem to be of much greater importance.

3. *Surface Finishing*

The trend of practice on the Continent was in the direction of rough-textured surface finishes, and the scraping method, now becoming popular at home is perhaps the most favoured, but there are also numerous other methods of producing a textured finish while the mortar is still plastic.

Texture is considered important in relation to weather-proofness, and a surface which breaks up and distributes the surface films of water running down the face of the wall tends to prevent penetration.

The value of the combination of materials and texturing described above has been amply demonstrated by the freedom of renderings so applied from cracking and crazing; freedom from streakiness after a period of weathering; and maintenance of colour.

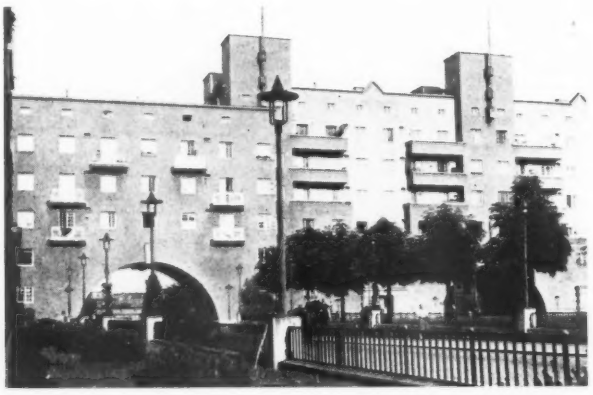
The suggestion to introduce cement-lime mortars for rendered finishes in British work may be met by the objection that the mixes described lack the merit of simplicity, and it is agreed that greater care in compounding than that customarily given to-day will be required. The use of gauge boxes—now almost obsolete in many districts for external work—will be essential.

There are self-evident advantages, especially where large areas have to be covered in a uniform texture, in having the mortar mixed dry in a works under controlled conditions. All that is then required on the building site is the admixture of water to yield a plastic and weather-proof rendering. In recent years several British firms have taken up the production of ready-mixed stucco and this must be regarded as a useful development. From what has been said the nature of such stuccos should be apparent and their claim to the attention of architects should be based, not on any particular secret of composition, but upon the use of well-known materials in suitable proportions, blended under controlled conditions as a standard, uniform product to meet any reasonable requirement as to colour.

Alternatively, the cement-lime stucco can be compounded on the building site either from cement and hydrated lime or putty, or by blending cement and sand in suitable proportions with lime mortar. By either means a satisfactory rendering can be obtained. Site conditions or the need for special colours and uniformity of appearance will turn the balance in favour of the factory-mixed material.

When, as is usual, renderings are mixed on the site, great care is advisable in the selection of sand. The unwisdom of ignoring sand quality will be clear if it is remembered that it constitutes three-quarters of the mixture. Careful attention to the composition of the binding material is wasted if no control is exercised over the sand. Loamy or ill-graded sand increases shrinkage and the tendency to crazing. Fortunately, there is now available a convenient way of specifying and securing a suitable quality of sand in the form of the British Standard Specification for Concrete Aggregates and Building Sands No. 882, 1944, which shows the limits of grading within which satisfactory sands for rendering lie.

A fuller account of the methods and materials described in the lecture will be found in Building Research Bulletin No. 16, "External Rendered Finishes" (H.M.S.O., 1s.) and the official recommendations regarding British practice are given in "Post-War Building Studies No. 1, House Construction" (H.M.S.O., 2s.) and "Housing Manual: Technical Appendices," 1944 (H.M.S.O., 1s. 6d.).



Karl Marx Workers' Flats when inspected in 1937 were found free from blemishes. A scraped finish rendering in various tints had been used.

The Condition of the Monuments of France

Some months ago, with the co-operation of Lieut.-Colonel Sir Leonard Woolley (Hon. A.), Archæological Adviser to the War Office, the Royal Institute was able to publish a number of interesting reports from the Directorate of Civil Affairs of the War Office on war-damaged monuments in France and Italy. Unfortunately we had to discontinue the series of articles because of the lack of space in the Journal. We hope, however, in the coming months to complete the series, as an important historical record which properly finds its place in the Royal Institute's Journal. The Reports on any particular country are published in the chronological order in which they were received; the later reports often supplement and in a few instances correct earlier reports.

SOUTHERN FRANCE

The Monuments and Fine Arts Officer with the 7th Army has sent a brief preliminary report from which the following is extracted; it deals only with the monuments entered in the official lists as being of first-class importance which the officer had personally inspected.

Département of Bouches du Rhone

Arles: The only two monuments to suffer at all were the Roman amphitheatre and the church of St. Julien; in both cases the damage was slight and can easily be made good.

Barbentane: The Tour du Cardinal Grimaldi and the Chateau are undamaged; so was Daudet's mill at Fontveille.

Les Baux: Was undamaged; so was St. Rémy; at Martigues several small buildings were bombed, but the important monuments escaped; the interior of the church at Montmajour was blackened by smoke but not seriously hurt, and at Peyrolles the chapel of the Holy Sepulchre is intact.

Tarascon: The city was badly damaged by bombing and the Church of Ste. Marthe suffered, but not irreparably, and restoration has already started. The Castle of Roi Réné, La Tarasque and the chapel of St. Gabriel are intact.

Département of Vaucluse

Avignon: The only damage to monuments was that the Porte St. Michel was partly destroyed; otherwise all is in good condition.

Gordes: German mortar-fire destroyed 17 buildings, but all the more important, including the Chateau and Abbey at Senanque are unharmed. In Buoux, Mirabeau, Port Julien, St. Pantaleon and Le Thor there was no damage; at Lourmarin there was German looting of small objects, but no structural damage.

Marseilles: The listed monuments suffered very little. Most are intact. Slight damage was done to the Chateau d'If, to the Forts of St. Jean and Entrecasteaux, to the Musée de Vieux Marseilles and to the Hôtel de Ville. One ancient building, the hôtel at 85 Grande Rue, was wrecked.

. Toulon suffered more severely than Marseilles, but no detailed report on the individual monuments there (they are not numerous) has yet come to hand.

NORTH-WESTERN FRANCE

First Report

It is difficult to estimate the damage done by war to the monuments of north-west France, and only too easy to minimise it. In the desperate fighting which raged over a large part of the peninsular a great number of buildings suffered which, while they could not rank as artistic or historic monuments of the first order, yet possessed such interest or charm as to make their loss deplorable. In the very detailed reports submitted by the officers of the Monuments, Fine Arts and Archives branch there figure many village churches and chateaux which are omitted from the Official List of Protected Monuments but whose safety, or destruction, does concern the lover of art; and there are many more such about which nothing is recorded. The following account is confined to the listed monuments, i.e., to those which by common consent are the most important in a country peculiarly rich in architecture.

In the four departments in the region of Rouen (Calvados, Manche, Orne and Seine Inférieure) there are 159 monuments entered on the official list; of these 90 are dealt with in the reports received to date.

Thirty-two are intact, namely, in Calvados, the chateau of Balleroy, the Cathedral, the Bishop's Palace, the Palais de Justice and the Hôtel de Ville at Bayeux, the Chateau at Blainville, St. Etienne (the Abbaye-aux-Hommes), Notre Dame de la Gloriette and the Lycée Malherbe at Caen, the Abbey at Cérisy-le-Foréut, the church and market-hall at Dives-sur-Mer, the chateau at Lasson, the basilica of Ste. Thérèse and the Carmelite convent at Lisieux; in Manche, the chateau de Chanteloup at Bréhal, the prehistoric monuments at Bretteville, Flamanville and Maubertuis, the Abbey at Hambye, the chapel of St. Germain at Querqueville, the chateau at Tourlaville, and the Roman remains at Valognes; in Orne, the gateway at Alençon and in Seine Inférieure the Abbey of Jumièges, the château of Mesnières-en-Bray, Corneille's house at Le-Petit-Couronne, the chapel of St. Jean at Le-Petit-Quevilly, the Grosse Orloge, the Aitre St. Maclou and the Musée des Antiquités at Rouen, and the Abbey of St. Georges at St. Martin-de-Boscherville.

Fourteen are described as "lightly damaged," i.e. as requiring only minor repairs which can be executed speedily out of local resources. These are: the Abbaye-aux-Dames at Caen, the church at Ouistreham, the château at Canisy, the church at Creully, the Cathedral of St. Pierre at Lisieux, the church at Morlain, the church of Notre Dame and the Préfecture at Alençon, the church at Ecouché, the church of Notre Dame and the Maison des Templiers at Caudebes-en-Caux, the two churches of St. Jean and St. Etienne at Elbeuf, and the Municipal Library at Rouen.

In these four departments alone, therefore, there are forty-four buildings of great artistic or historic value which are already recorded as having been seriously damaged or altogether destroyed. At Caen the main losses are those of the churches of St. Jean and St. Pierre, the latter one of the finest buildings in the city, dating back to the 13th century, and the Romanesque and late Gothic church of St. Gilles; only two of the mediæval wooden houses which gave so much character to the old town are left; the Hôtel d'Escoville and the Hôtel de Than, both of the 16th century, were gutted and the Hôtel de Ville was completely destroyed. At Falaise the 13th century church of La Trinité with its 16th century choir and remarkable Renaissance porch was badly damaged and St. Gervase, an equally important and even earlier church, was altogether ruined, and the 13th century Castle with its twelve towers suffered very severely. The Romanesque church of Colville-sur-Mer with its fine bell-tower was destroyed, as were the chateau at Thury Harcourt and the

old houses at Lisieux and at Pont l'Evêque, where the 16th century church of St. Michel was burned. At Vire the Tour d'Horloge and the Benedictine convent were ruined. The churches of Carentan and of Lessay were terribly damaged, the Cathedral at Coutances less seriously; but at St. Lô the Cathedral of Notre Dame was ruined, as was the church at Valognes, and the Hôtel de Ville in the old castle at Torigni-sur-Vire, with its unusual 17th century decoration, was gutted by fire. In the department of Seine Inférieure the only serious damage reported is at Rouen, the capital; the church of St. Vincent and the Palais de Justice were destroyed; the Cathedral, the churches of St. Ouen and St. Maclou, the Hôtel de Bourtheroulde and the Musée des Beaux Arts were all damaged. Further south, in the Regions of Rennes (Departément of Ille et Vilaine) and of Anger (Départements of Indre et Loire, Maine et Loire, Mayenne and Sarthe), reports deal with twenty sites containing fifty-six officially listed monuments. Forty-four of these are intact, four are slightly damaged, the chateaux at Amboise, Chenonceaux, and Chinon are partly demolished; the most serious damage was at Tours, where all the six most important monuments suffered severely; the Cathedral of St. Gatien, with its astonishing western façade (1426-1547) and its 13th century choir, was partly demolished, as were the (earlier) church of St. Julien, the Hôtel Gouin, with its early Renaissance façade and the 16th century Hôtel de Jehan Gallant, and the Municipal Library and the municipal archives.

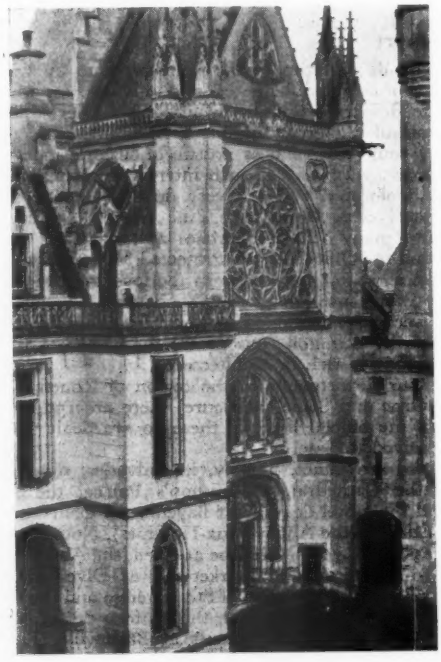
In the department of the Aube, the only important site is Troyes, which suffered only one irreparable loss; on 14 June the German guns set fire to and completely destroyed the little timber-framed chapel of Saint Gilles, dating from the 15th century. Its wood carving and its paintings have all perished; it is possible that the 16th century triptych of the Passion may have been removed previously, but there is at present no evidence of that. Apart from this, the town suffered relatively little damage. The fortified Planche-Clement bridge, a relic of the mediæval city walls, was blown up by the Germans. The Church of St. Nizier had a shell hit on the roof which destroyed much of the tiling, and part of the Renaissance front gateway was destroyed; the Cathedral of St. Pierre also had one shell-hole through the roof, but the damage is easily repairable. Most of the ancient stained glass from the churches had been taken down in 1940 and put away in safety; a few windows were left, and some of these have suffered from bullets or from blast. Several of the churches bear marks of bullets or shell splinters, but only the two mentioned above suffered any structural harm. Of other important buildings in the city the 18th century hospital, the Hôtel de Dieu, was the only one damaged; its chapel and part of the main building were injured by the explosion which destroyed the bridge, but the famous wrought-iron grille (1760) was unhurt. A shell-burst in the Museum destroyed three statues; otherwise the art collections, the libraries and the archives of Troyes are intact.

In the department of the Marne, Châlons-sur-Marne received considerable concussion damage due to the demolition of the bridges by the Germans. The Cathedral felt the worst effects, it has also been scarred by shrapnel during German air raids, but the damage is not serious, and in the case of the churches of Notre Dame and St. Alpin was very slight. All the old glass had been removed. The churches in the smaller towns of Lépine, Ponthion and St. Armand-sur-Fion are intact, and Reims suffered no hurt at all.

In the department of Aisne, Laon was badly damaged by bombing, but the Cathedral, an outstanding example of early Gothic architecture (1155-1225 A.D.), was virtually untouched, a few stones being chipped by bomb fragments. The Palais de Justice, the old Bishop's Palace, dating to the 13th century, suffered only from window-breaking. The Soissons gate was unhurt, but the Porte d'Ardon was badly damaged by a direct hit; the octagonal 12th century "chapelle des Templiers" escaped injury; the Eglise St. Martin, the Hôtel Dieu and the Préfecture were all more or less destroyed. At Soissons the Cathedral is intact, as is the Roman amphitheatre; the Abbey of St. Jean-des-Vignes, partly destroyed in the last war, suffered yet more damage from shell and rifle fire. At Braine the church of St. Yved, an important 12-13th century building, has been badly damaged by our shell fire: it was used as an artillery observation post by the Germans, who also had snipers on the roof and in the tower. In the Eure et Loire, the city of Chartres was seriously damaged. The Germans blew up the bridge and at the same time destroyed the Porte Guillaume, the 14th century river gate. German bombing gravely damaged the Hôtel de Ville, the 17th century Hôtel of the Montescot family; the 16th century sculptured tower called the Escalier de la reine Berthe, and the 13th century Maison Cannoniale with its contemporary bas-reliefs, were both somewhat damaged by concussion. Fortunately the glorious Cathedral escaped lightly; all its glass had been removed and stored; a German anti-aircraft shell hit the face of the South tower but did little hurt, and the effects of concussion do not seem to be serious. At Châteaudun the tower walls of the old castle were cracked when the Germans blew up the bridge; the chateau at Maintenon had no structural damage.

Of other important sites, Blois was not hurt in any way. Orleans was less fortunate, the whole city suffering first in 1940 and again in 1944 from air raids and from battle. The north tower of the Cathedral was damaged by shell fire: the church of St. Aignan and the Hôtel de Ville had minor damage only, but the Musée Jean d'Arc and the Musée Fourché were destroyed.

Fontainebleau is intact; so are the cathedral of Meaux, the Château de Vaux at Vaux le Vicomte and the church at Etampes, together with Diane de Poitiers' house and the Tour de Guinette. On this part of France we have at present only preliminary reports.



The Château Pierrefonds, Oise, showing the chapel. German artillery damaged the upper left window in 1940.

Second Report

In the Laon region, province of Aisne, the château of Blérancourt, built by Salomon de Brosses and Hardouin Mansart, now used as a Franco-American Museum, the ruined castle of Coucy-le-Château, the church of Notre Dame and the 14th-century castle ruins at La Ferté-Milon with the splendid relief of the Coronation of the Virgin, the church, town hall and museum at St. Quentin, the château at Vic-sur-Aisne, and François I's château built by Philibert Delorme in 1532 at Villers-Cotterets, are all intact, as are, in the province of Oise, the château of Pierrefonds, built in 1400 for Louis of Orleans, brother of Charles VI, and restored by Viollet-le-Duc, St. Gildas' Church at Rheys, all the monuments of Senlis, and the church at Verberie and in the Somme province the ornate church of St. Riquier with the 15th-century statue of the Virgin above the porch. Abbeville was hard hit in 1940 ; the church of St. Vulfran with its fine flamboyant façade of the 16th-century and the 13th-century belfry was gutted, the museum was destroyed with all its contents, and the Hôtel de Ville was razed to the ground.

In the province du Nord, Valenciennes has lost its Hôtel de Ville, burnt in 1940, and the library is damaged ; but Watteau's monument is intact. In the Pas de Calais, the Gothic abbey church of St. Saulve and the brick fortifications of Montreuil-sur-Mer are unharmed, and at St. Omer, though the 15th-century tower of St. Bertin was damaged, the great basilica of Notre Dame escaped.

For Alsace-Lorraine full reports are not yet to hand, but at Strasbourg the Cathedral is very little damaged and of the city's other monuments only the Palais de Rohan, a fine late-Renaissance building by Robert de Cotte, has suffered severely. Nancy is virtually untouched. The pictures from Colmar museum have been found safe in the château of Hoh-Koenisbourg ; at Cons-la-Grandeville the 16th-century château and the church were wantonly damaged by the Germans on their withdrawal. At St. Mihiel the abbey with its library and museum and the church of St. Michel with its Romanesque portal are intact ; at Verdun damage was limited to the Sous-Préfecture and Palais de Justice (17th-century), which was almost destroyed ; the splendid Cathedral and the 16th-century Princerie with its collections suffered only minor concussion—damage to windows and roofs.

In the whole of the department of the Seine, outside Paris, only minor damage to monuments has been reported and even that in very few places—the chapel of the château at Vincennes, built by François I, has been gutted, the windows of the church at Vitry-sur-Seine have gone, and there is very slight damage to the north-east corner of the abbey of St. Denis. In Paris itself, part of the Palais Bourbon was gutted, but otherwise the buildings have suffered little more than scratches from rifle-bullets and the breaking of window-glass. Versailles is intact.

In the department of the Eure the only damage reported is that inflicted in 1940, and in some cases at least, such as Louviers, the damage has been repaired since. In the Orne, the church of St. Germain at Argentan with its curious combination of architectural styles has been severely damaged and the church of St. Martin at Laigle (15th-16th century) has lost its roof. In the department of Seine Inférieure Arques-la-Bataille is untouched, at Caudebec-en-Caux the fine flamboyant church of Notre Dame and the 13th-century Maison des Templiers are but very slightly damaged ; at Dieppe, St. Rémy has suffered slightly, but St. Jacques and the Protestant Temple are intact. The 11th-century Romanesque church at Graville Ste Honorine on the other hand is much ruined, and at Le Havre damage was widespread and the three museums of the city were all destroyed.

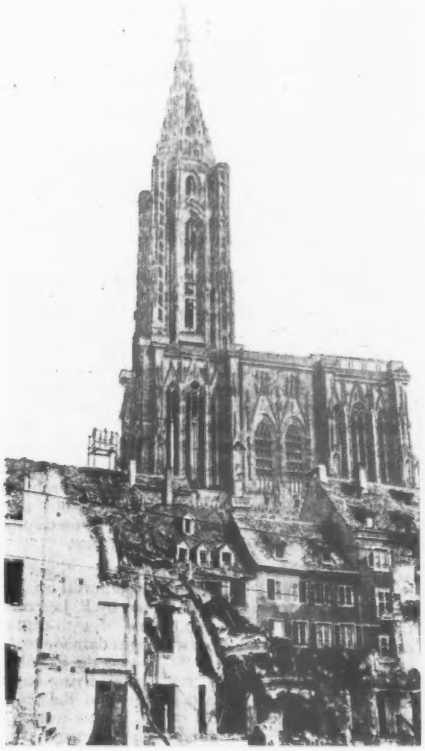
In the department of Ardèche, the church of Bourg-St-Andéd suffered much from bombing and from fire ; Viviers escaped lightly and its Cathedral, the Episcopal Palace and the Maison des Chevaliers are safe ; in Drôme the church of St. Bernard at Romans lost some good stained glass, but at Valence there was no real damage to any of the monuments. In three departments, Tarn, Gantal, and Lozère, all the listed monuments without exception are reported to be intact.

The churches of Lyons suffered little more than broken glass, and most of the better windows had been removed and placed in safety ; the 12th-century Pont Guillotière was destroyed and the dome of the Hôtel Dieu by Soufflot was completely destroyed by fire. The Roman bridge at Vaison-la-Romaine was badly damaged and the towers and gates of Pernes-les-Fontaines also suffered ; the dungeon and tower of the ruined Châteauneuf-du-Pape were blown up by the Germans.

Third Report

In the region of Châlons-sur-Marne, in the department Aube, the important 13th-14th-century church at Villemaur, with its square wooden tower and fine 16th-century choir screen, is intact. So are the 13th-century château at Baye and the church at Montmiroul in the department of Marne.

In the region of Dijon, department Yonne, Auxerre escaped lightly. The Cathedral lost a little 16th-century glass of no great interest. Some of the fine old roofing of St. Eusèbe was destroyed by blast but otherwise the church is intact (from this church, as from the Cathedral, all the good glass had been removed to safety) ; the chapel of St. Clément and St. Michel, the church of St. Germain, the Préfecture and the Porte d'Horloge are intact. The main loss was that of the windows of St. Pierre ; none of the 16th-century glass had been taken down and this, together with the tracery, and much of the roofing, was destroyed by blast. All the glass was destroyed in the churches of Pont-sur-Yonne and Pontigny, but the structures are sound. More serious damage was caused by air bombardment to the church of St. Florentin Vergigny : here the glass is safe but the carved window-frames are shattered, the transept walls are cracked and the Renaissance façade badly chipped. There was slight damage to the church of Neuvy Sautour. The



STRASBOURG

On Left : South-West corner of the Château de Rohan from the Courtyard.

On Right : The Cathedral.

ARGENTAN

following " protected " monuments in the department are intact :— The château of Bazoches, the church of Prienon-sur-Armençon, the church and old timber houses at Joigny, the churches of Montréal, Noyers, Quarré-les-Tombes, Savigny-en-Terre-Plaine, the Cathedral, church of St. Jean and Archbishop's palace at Sens, the château of Tanlay, the Hôtel d'Uzès at Tonnerre and the churches at Villeneuve-sur-Yonne and Villeneuve-l'Archevêque.

In the department Oise the church at Montataire, a fine 12th-14th-century building with fortified bell-tower and sculptured façade, escaped with one damaged window. The early Gothic (13th-century) church at St. Leu d'Esserent was hit by two bombs and severely damaged.

In the department of the Somme, the monuments of Montdidier escaped damage ; there was slight damage to the church at Tilloloy. In Alsace-Lorraine, in the department Meurthe et Moselle, Nancy preserved all its listed monuments intact with the single exception of the church of Notre Dame-de-bon-Secours, which suffered from concussion to the extent of losing its window glass (not ancient). The château of Haroue is intact, that of Ludres was looted and suffered slight damage—one sculptured bridge finial was destroyed. The 12th-13th-century church of Liverdun, which was the centre of heavy fighting, was hit a number of times: the roof was holed over the transept, much tiling dislodged, the walls damaged and scarred and the leaded windows smashed ; the Renaissance choir-stalls were only superficially damaged. The church of St. Nicolas-du-Port was severely damaged by German attack in 1940 : the roof is being repaired, the exterior walls are sound : the sculptured portal (miracle of St. Nicolas) and the group under the altar are not injured. At Toul the Hôtel de Ville was largely destroyed in 1940, the central building being burned out.

In the department Meuse, the church of St. Etienne and the other monuments at Bar-le-Duc are intact. At Prény the church (largely rebuilt since 1918) was slightly damaged, but the 16th-century Virgin and the sculptured Deposition in the cemetery chapel are unharmed. The ruined castle received some damage.

In Seine-et-Marne the very fine early 13th-century church of Donnemarie-en-Montois with its sculptured portal is intact, as is the important château of Fleury-en-Bière designed by P. Lescot. At Moret-sur-Loing the windows of the church, some of 15th-century glass, were badly damaged by blast and there was slight damage to the Porte de Bourgogne and the Porte de Samois. At Provins the very important church of St. Quiriace was hit rather severely ; two flying buttresses were destroyed, the dome and side walls damaged and the sculptured west doorway chipped, and a good deal of the timber-work and roofing damaged. At Rampillon the Templars' Church was unharmed.

In Seine-et-Oise the châteaux of Chamarande, Dampierre and Davron are intact, that of Courances was looted and slightly damaged by the Germans. The châteaux of Méry-sur-Oise, Mesnuls, Mill, Pontchartrain and Rambouillet are unharmed, that of La Roche-Guyon slightly damaged. At St. Germain-en-Laye the château is intact, that at Ste Mesme is slightly damaged, mostly as a result of German occupation. The church at Vetheuil was hit and lost its one chapel and some windows : the 14th-century stone Virgin is unharmed. In Eure the roof and central tower of Notre Dame at Les Andelys were damaged in 1940 and are under repair : the stained glass was saved. The château Gaillard is intact. Intact also are the abbey of Bec-Hellouin, the church of Ste Croix and the museum and Benedictine abbey at Bernay, the old houses at Conches, the church at Ecouis, the château Thevray at La Ferrière-sur-Risle and the old Archbishop's castle at Gaillon. At Givernay the studio of Claude Monet was itself unharmed but some of the pictures were damaged ; there was slight damage to the ruined castle at Harcourt. At Pont Audemer the important flamboyant church of St. Ouen was damaged, mostly in 1940-41. The tracery of some windows was broken (the stained glass had been removed) and the roof of apse and choir chapel was holed : interior damage was slight. At Pont de l'Arche the church of St. Vigor suffered from shell-fire, the roof being damaged, the windows smashed (the old glass had been removed and is safe) and the walls pierced in two places. At Vernon the damage to the 13th-century church is limited to the tracery of some of the windows.

In the department Orne the château of Chambois is intact, as are those of Domfront and Sassy. In Seine Inférieure the town of Eu escaped injury and the church of St. Jaques at Le Tréport is unharmed.

In the Cotes du Nord, Dinan lost many of its old houses and the roof and tower of the church of St. Sauveur were damaged, as was the Porte de Gerzual : the Donjon de la Duchesse Anne with its museum was unhurt. At Guingamp the church of Notre Dame-de-bon-Secours was damaged, the lantern over the crossing and a vault in the south transept being destroyed : the fountain in the Place du Centre was not damaged. The Abbaye de Beauport at Kérity, the church of St. Jean at Lannion, Notre Dame at Lamballe, St. Mathurin at Moncontour, the Cathedral and the old houses at St. Brieuc and the Cathedral and cloister of Tréguier, together with Renan's house there, are all intact.

In Finisterre, a department for which the reports on listed monuments is now complete, the total damage amounts to very little. At Brest the castle is damaged and the chapel of Ste Anne-du-Portzic in the neighbourhood of the port has lost its windows. At Plougastel-Daoulas the very fine Calvary, one of the best in Brittany, and the church which it adjoins, were damaged, but by no means irreparably. In Ille-et-Vilaine there was slight damage to the castle and fortifications of St. Malo. In the Haute Garonne the nave vaulting of the church at Blagnac was damaged by a German aeroplane crashing on it ; there was no other serious damage in the department—bullet marks on the towers of St. Sernin and of St. Etienne at Toulouse. In the department of Tarn there was no damage at all to any listed monument.

In the Rhône department there was slight damage, for the most part confined to windows, to the Cathedral at Lyons and to the churches of St. Martin, St. Bruno, St. Nizier and Notre Dame de Fourvières : all the good glass had been removed. St. Pierre was untouched, as were the other monuments of the city with the exception of the Loge du Change, slightly damaged.

In the Bouches du Rhône, damage at Aix-en-Provence was confined to the breaking of some tiles on the roof of the church of St. Jean-de-Malte. At Villeneuve-lès Avignon there was slight damage to the Castle St. André and to the Chartreuse du Val-de-Bénédiction. In Gard, the château at Aigues-Mortes received some damage and the château de Beaucaire was bombed and its roof partly wrecked. At Nimes the amphitheatre was defaced by the erection of an air-raid shelter, but the damage is only superficial. At Pernes the Cathedral windows were smashed by blast and the mining of the bridge by the Germans ruined the little chapel adjoining. The famous Roman bridge at Vaison la Romaine was partly destroyed.

Fourth Report

In Hérault, Montpelier escaped all harm, as did Pézenas, where the Hôtel Malibran still stands intact.

For many of the departments of France the reports now received are either complete or so nearly complete that the general account can be summarised. There are, of course, many in which no fighting has taken place, and with these the Army is not concerned. In others again battles are still going on, or were going on so recently that the work of investigating and recording damage has still to be done.

REGION OF CHÂLONS-SUR-MARNE

Department Aube. There was no war damage to the early 14th-century church of Ervy, to the church of Mussy-sur-Seine with its tomb of Guillaumin de Mussy (late 13th century) and to the church of Rouilly ; in all these cases the fine early stained glass had been taken down and stored. The mediæval bridge with its 15th-century chapel of Alexandre de Bourbon over the Aube at Bar-sur-Aube was damaged in 1940 ; the church at Vendeuvre-sur Barse was gutted in 1940. The other monuments in the department (including Troyes) have already been published.

Haute Marne. The Romanesque church of Montier-en-Der was gutted in 1940. Chaumont, with its great church of St. John the Baptist, its château, its 11th-century donjon, the Tour Haute Feuille, and its museum, escaped all hurt ; so did the church at Ceffonds and the remarkable château du Grand-Jardin at Joinville.

Marne. Reports on all the monuments have already been published.

REGION OF DIJON

All the monuments of the department of Yonne have been published.

REGION OF LAON

In Aisne the only addition in recent reports was that on Liesse, where damage was limited to the roof and to the breaking of windows, involving some good stained glass. This accounts for practically all the listed monuments. In Ardennes, superficial damage is reported to the churches of Buzancy-Bar and Mouzon : at Rethel the historic church of St. Nicolas was damaged in 1940 and has since been repaired ; neither it nor the other monuments of the town suffered in the recent campaign. In the department Oise recent reports give the château at Compiegne as intact ; at Moyon slight damage was done to the Cathedral in 1940 and has since been made good, and the Maison de l'Evêché is intact. The Abbey at Ourscamp, with its important 13th-century ruins and Salle des Morts, is untouched, as is the 13th-century church of St.-Jean-aux-Bois. For the department of Somme the record is now complete ; the 11th-century church at Caubert, with Romanesque porch and primitive carving on the west façade, suffered slight blast-damage limited to window glass and ceiling plaster in 1940, but is structurally intact. The church at Corbie is untouched. The church of Notre Dame at Doullens, in the flamboyant style of the 15th-16th centuries, was reduced to ruins. The flamboyant church at Follville with its finely vaulted choir and interesting tomb monuments (one to Raoul de Laynoy by Temagnino (1507) and one to François de Laynoy (1549) by Mathieu Laigne) is intact, as is the (ruined) castle. The church at Fontaine-sur-Somme, remarkable for its open-work stone spire, was gutted in 1940 and is in bad condition (in spite of provisional repairs), but the Renaissance porch and the spire are unharmed. The château at Lucheux is intact, as are the church at Neuville-sous-Corbie with its sculptured western façade and 12th-century carved font, the mediæval château at Rambures and the highly decorated Chapelle de St. Esprit at Rue ; there is slight damage to the ramparts of St. Valéry-sur-Somme and to the Château de Tilloloy.

The Calvary, Plougastel-Daoulas.

In the region of Lille most of the monuments of the department du Nord have now been reported on. At Bergues the church of St. Martin and the famous belfry were mined and totally destroyed by the Germans. At Cambrai the Palais Fenélon is intact. The old Hôtel de Ville at Cassel has been gutted. At Douai there is very little damage and the town's monuments are virtually intact, as is the case at Lille also. Seclin, with its 13th-century hospital and church (the latter having a pre-Romanesque crypt), escaped altogether.

In the whole of the Pas de Calais only one listed monument, the tower of St. Bartin at St. Omer, has been damaged at all.

Alsace-Lorraine has, of course, been the scene of heavy fighting and for large areas reports have yet to come in. In the department of the Meuse the church of St. Etienne at Bar-le-duc is intact, as were all the other monuments of the town, including the Cathedral, in spite of the latter's being only about 50 yards from the bridge which was a target of American pin-point bombing on 11 August 1944—the bridge was destroyed. The château of Jean d'Heure at Lisle-en-Ricault is undamaged, as is the church at Mognéville, a fine building of the 12th and 15th centuries with a remarkable altar screen. In the department of the Moselle Metz fared better than might have been expected, the Cathedral suffered from concussion and received two direct hits from German shells (one destroyed the east window in the chapelle of the Sacred Heart, the other damaged the tracing on the outside of the apse) but is structurally sound ; the magnificent stained glass had been removed to safety. The Hôtel St. Livier is intact ; the Musée des Beaux Arts is only slightly damaged ; the best of its contents had been stored outside the city : the paintings, etc., were in part destroyed. the archæological and geological collections are safe. The historic archives suffered severely, a large part of the MSS., etc., being burned, others carried off by the Germans.

In the Vosges, Jeanne d'Arc's house at Domrémy is intact.

In the region of Orléans, in the department Eure et Loire, all the monuments of Nogent-le-Rotrou are safe. In Loire-et-Cher there has been virtually no damage, either in Blois itself or in the smaller towns ; the Renaissance château of St. Aignan, partly destroyed in 1940, is the only exception. The châteaux of Chambord, Chaumont and Cheverny, the churches of Mesland, Trôo and Vendôme are all intact. In Loiret there was slight damage (previously reported) in Orléans, where the Musée Fourché and the Musée Jeanne d'Arc were destroyed, the château of Gien was damaged in 1940 (it has since been repaired) and the château of Sully-sur-Loire also suffered in 1940. Otherwise every one of the listed monuments in the department is intact.

In the Paris region the only fresh reports are for the department of Seine et Marne, the château at Champs is intact, in Seine et Oise the château of Marais is intact also. Reports already published have given a complete account of the monuments of the Rouen region in the departments of Calvados, Manche and Eure except for four sites in the last-mentioned department of which one, the ruins of the château Gaillard at Petit Andelys, is unharmed. In Orne the château of Carrouges (15th-17th century) is intact. The prehistoric megaliths at Cremenil, Voue du Bois and Silly en Goufferne are safe, as are the church at La Chapelle Montligeau and the château (by Mansart) of Haras du Pin. At Mortagne-au-Perche the 15th-century church of Notre Dame suffered no more than the loss of its (modern) stained glass windows ; the Porte St. Denis (12th-century arcade with 16th-century dwelling above) containing the Musée Percheron is intact. The château d'O at Mortrée and the château at Sassy are intact, as is the church at St. Céneri-le-Gérei with its 13th-century frescoes : the important Cathedral of Sées is practically unharmed but there was slight damage to the tower due to artillery fire. The Abbay de la Trappe, the mother-foundation of the Trappist Order, at Soligny-la-Trappe, a modern building but with an important library, was untouched. Thus all the monuments of the Orne department are accounted for. In the department of Seine Inférieure the church of Aumale with its porch sculpture attributed to Jean Goujon, some good stained glass and, in the 17th-century choir and apse, remarkable bosses at the centerings of the vault ribs, in 1940 suffered some damage to the transept vaults which has since been repaired. The Roman theatre at Lillebonne is intact. At Montivilliers the 11th-century church, the cemetery of Brisgaret with its carved wooden gallery and the museum and library are all safe ; but the church of Moulineaux with its unusual wood rood screen was damaged. The château at Tancarville, the Renaissance Manoir d'Ango at Varengeville-sur-Mer and at Valmont the abbey and conventual buildings (with paintings by Delacroix) and the château des Sirs d'Estouteville are all intact.

In the region of Angers the report that the museum in the Mairie of Le Grand Pressigny is safe completes the record for the department of Indre-et-Loire. In Maine-et-Loire there has been very little

damage ; returns are now complete and all the listed monuments are intact except for a few cases of minor damage (previously published) at Angers. In Mayenne the following are intact : the château of St. Ouen at Chemazé ; the château (by Pommereul) at Craon ; the important early church (with 14th and 16th-century stained glass and 12th-century frescoes in the Chapelle de St. Crépin) and the market buildings at Evrou ; the Roman remains at Joublains ; the château at Ste Suzanne and the church at St. Paterne. The early Romanesque church of St. Jean at Château Gontier with its 11th-century crypt was burned down in 1940. In the department of Sarthe the château at Le Lude is undamaged.

In the Rennes region the fortress of La Latte has been partly demolished. All other monuments in the department of Côtes-du-Nord and all in those of Finistère and Ille et Vilaine have been described in previous reports ; in Morbihan the basilica of Ste Anne-d'Auray at Auray and the old houses in the Rue de Loit are undamaged. At Le Faonet the late 15th-century Chapelle Ste Barbe, flamboyant Gothic with fine Renaissance stained glass, and the contemporary Chapelle St. Fiacre with its remarkable façade and bell-tower, are both safe. At Hennebont the church of Notre Dame du Paradis (1513-1530) has been partly destroyed and the 13th-century gate fortress, the Porte du Bro-Erech, containing the Breton museum, has been gutted. At Josselin the church of Notre Dame du Roncier, dating back to the 12th century and containing the tomb of Olivier de Clisson (1407), is intact ; the historic castle has lost its windows and roof, but is structurally sound. The flamboyant Gothic church of Ploermel, which has a sculptured portal and eight windows of 15th and 16th-century glass, has lost some of the glass. At Vannes all the monuments are undamaged.

PRACTICE NOTES

EDITED BY CHARLES WOODWARD [*A.*]

INTERPRETATION OF STATUTES

Halsbury's Laws of England contains the following passage on the interpretation of statutes :—

" Light may be thrown on the scope of a Statute by looking at what Parliament was doing contemporaneously, and at the history of the Statute ; but even when words in a Statute are so ambiguous that they may be construed in more than one sense, regard may not be had to the Bill by which it was introduced nor to the fate of amendments dealt with in committee of either House, nor to what has been said in Parliament or elsewhere, nor to the recommendations of a Royal Commission which shortly preceded the Statute under consideration." (*Halsbury's*, Vol. 31, second edition, page 490.)

In recent legislation the tendency is to draft clauses beginning with " Where the Minister is satisfied that it is expedient " or similar words that give the Minister complete freedom.

In a book recently published dealing with the Town Planning Acts, the author of which is Mr. J. R. Smith-Saville, Solicitor of the Supreme Court, an interesting suggestion is made. It is pointed out that during the debates on these Bills the meaning to be given to particular words was explained by the Minister, and that in exercising his powers he would give effect to those words in accordance with the explanation given to the House. For this reason it is considered that Hansard could be quoted in any case where a Minister is exercising his powers in a way that does not accord with those explanations.

Under the Town and Country Planning Act 1944, the Minister, if he is satisfied that it is requisite, may make an order for the compulsory purchase of war-damaged land " together with other land contiguous or adjacent thereto." The Minister explained to the House that these words were meant to be wide enough to include land which was not touching the war-damaged land but was physically separated from it by, for instance, a road or open space. Under the same Act the Minister may compile lists of buildings of special architectural or historic interest for preservation purposes, and thereafter the building may not be altered or extended so as to " seriously affect the character of the building." It was explained in the House of Lords during the passage of the Bill that the intention was to preserve the characteristics of the building which made it valuable in a national or public sense, and that internal alterations which did not affect those characteristics would be regarded as permissible without obtaining the approval of the local authority.

If by this method of legislation the interpretation of statutes by the Court is intended to be excluded it would seem to be necessary for extracts from Hansard to be available. The Minister who explained the meaning of a clause to the House may not be the Minister who ultimately administers the Act, and it would therefore be important to be able to refer the new Minister to the words of his predecessor. Mr. Smith-Saville's book includes references to Hansard, but there are other Acts drafted in a similar way where such references are not easily obtainable. It may well be that books dealing with future legislation should contain such Parliamentary explanations as would enable persons affected by a Minister's interpretation to question it if the interpretation was not in accordance with such explanations, and to represent to him that he was not acting as Parliament intended when it agreed to the particular words.

If the Minister is unconvinced and there is a reference to the Court, presumably the rules of interpretation quoted at the head of this note would govern any such reference and that explanations given in Parliament during the passage of a Bill would not be admissible.

WAR DAMAGE

Notification of War Damage

The War Damage Commission have issued a notice dated 16 July 1945 pointing out that they are receiving notice of war damage in cases where the damage occurred a considerable time ago and notification is now being given for the first time. This delay may create difficulties and the Commission ask that in order that claimants may not be at a disadvantage they should at once complete Form C.1 and send it to the Commission. It may be that all such belated notifications will have to be supported by a statutory declaration.

BUILDING REGULATION

Codes of Practice

The following Codes of Practice have now been issued for comment :
Internal plastering—2.2.
Preparation of surfaces to receive plaster—2.21.
Cement finishes—2.24.
Lime plastering—2.22.
These codes have been prepared by the Code Committee convened by the R.I.B.A. dealing with Finishings.

Repair of War-Damaged Houses

The Ministry of Health have issued a Circular 131/45 dated 17 July 1945 to Housing Authorities in the London Civil Defence Region indicating the policy that should be pursued in the next few months in the repair of war damaged houses. The categories of repair include adaptation and conversion of large houses, the erection of new houses and the re-erection of totally destroyed houses which qualify for a cost of works payment under the War Damage Act. Regional Architects of the Ministry of Health are to confer with Local Authorities with a view to arriving at a provisional programme of work.

A further Circular 138/45 dated 20 July 1945 has been issued by the Ministry of Health addressed to all Local Authorities in England. Between 1 August and 31 December 1945 local authorities may issue licences for building work in excess of £100 in respect of :—

1. The erection of a new house or the preparation of a site for new houses, or the rebuilding of a cost of works house.
2. The completion of a partly built house or the completion, adaptation or repair of existing premises with a view to providing additional housing accommodation.
3. The repair of war damaged houses essential to make them habitable or to provide additional housing accommodation.
4. The execution of work on houses which is required by statutory notices.

In the case of the rebuilding of cost of works houses and of the repair of war damage exceeding £250, the Circular states that licences should not be issued until the War Damage Commission has approved the specification and price.

TOWN AND COUNTRY PLANNING

Location of Industry Restriction

The Board of Trade have made an Order, which came into force on 14 June 1945, whereby licences will not now be required to carry on any trade or business in premises so as to cause those premises to be either a factory or warehouse if the aggregate floor space of the premises is less than 3,000 square feet. Garages, including motor vehicle and cycle repair shops, are exempt, as are also factories and warehouses let or sold by a Government Department. In calculating the floor area any number of separate premises within an area of one quarter of a square mile are to be treated as being parts of the same premises. (S.R. & O. 1945, No. 671, Emergency Powers (Defence) Location of Industry (Restriction.)

Estate Management of Acquired or Appropriated Land

The Minister of Town and Country Planning has appointed a Committee, consisting of officers of his Department and members of the Chartered Surveyors Institution and the Auctioneers and Estate Institute, to advise him on any question relating to Estate Management and Estate Development of land acquired or appropriated for the purpose of the Town and Country Planning Acts 1932 and 1944, which he may refer to them.

"Owner-occupier" Defined

Regulations have been made by the Lord Chancellor in respect of the acquisition of land under Section 58 (5) of the Town and Country Planning Act, 1944. The Regulations define an "owner-occupier" entitled to compensation under the Act (S.R. & O. 1945, No. 759/L.12. Land, acquisition of, England).

Town and Country Planning. Interim Development. Corporation of the City of London

The Corporation of the City of London have issued a Direction under Article 5 of the Town and Country Planning (General Interim Development) Order, 1945, providing that development in the following cases shall not be undertaken unless permission is granted on an application.

Class 3. Rebuilding, restoration or replacement of buildings and plant which have sustained war damage *except* restoration or replacement of plant and operations to avoid danger to health or temporarily meeting the circumstances created by the damage not exceeding a cost of £300.

Class 4. Alterations to existing buildings and maintenance of existing buildings *except* alterations or operations for maintenance not exceeding a cost of £300.

The Direction is dated 14 June 1945 and was consented to by the Minister of Town and Country Planning on 25 June 1945. It applies to the whole of the area of the City of London.

Local Government (Boundary Commission) Act 1945

This Act came into force on 15 June 1945 and applies to England and Wales but not to London.

The Act sets up a Commission whose duty is to review the circumstances of the areas into which England and Wales are divided for the purposes of local government, and to alter those areas if it thinks it expedient.

The Minister of Health may make regulations prescribing general principles by which the Commission are to be guided, and the regulations must be approved by each House of Parliament before becoming effective.

The Commission have power to alter or define the boundaries of a county, county borough or county district, to unite a county with another county, to divide a county into two or more counties, to constitute a borough a county borough, to constitute a new urban or rural district or to convert a rural district into an urban district or an urban district into a rural district and to alter parish boundaries.

The Minister may direct the Commission to consider whether such alterations should be made or they may consider such alterations without any direction if applied to by the council of a county or county borough, or by the council of the county in which a district area is situated.

The Commission determine by Order whether or not alterations ought to be made. An Order shall not be reconsidered by the Commission within ten years of the date of the Order unless they are satisfied that a change in the distribution of the population or other circumstances makes it desirable. An Order relating to a county or county borough must be confirmed by Parliament before it is effective.

The regulations must provide for objections by affected persons and for local inquiries to be held in the circumstances specified in the Act.

An Order made by the Commission is to be transmitted to the Minister together with a statement of the reasons leading to the making of the Order and the Minister is then to lay the Order and the statement before Parliament.

The Commission must make an annual report of their proceedings to the Minister.

Some of the provisions of the Local Government Act 1933 are repealed by this Act, as set out in the Second Schedule, and the First Schedule regulates the constitution and proceedings of the Commission.

HOUSING

The Lord Privy Seal (Mr. Greenwood) stated that the Minister of Health and the Secretary of State for Scotland are to be the authoritative people for dealing with the building of houses. The Minister of Works will be responsible for the programme of prefabricated houses and for houses of temporary construction, and will act as Minister of Supply to the building industry of the country.

He found it difficult at this stage to believe that the House would agree for one moment to let loose, by the aid of a subsidy, large scale private building of houses for sale whilst the most urgent needs of the people remained.

The Lord Privy Seal further added that the Housing (Rural Workers) Act, which expires on 30 September 1945, is not to be continued, but reconditioning of rural workers' cottages will be part of the general housing programme and housing campaign. (17 August 1945.)

Bills of Quantities for Housing Work

The Chartered Surveyors' Institution and the National Federation of Building Trades Employers have agreed upon a "Code for the measurement of Building Work in Small Dwelling Houses." This document is referred to in Circular 149/45 dated 9 August issued by the Ministry of Health to all housing authorities in England, and the Minister suggests that its use by local authorities should be seriously considered and he encourages them to make the fullest trial with the new system.

Co-ordination of Housing Work

The Ministry of Health have issued a Circular 144/45 dated 25 July intimating that in the London Civil Defence Region the London Repairs Executive has been brought to an end and replaced by an Interdepartmental Committee. The chairman of the Committee is Mr. H. Symon, of the Ministry of Health, and the Committee includes representatives of the Ministry of Health, the Ministry of Works, the Ministry of Labour and National Service and the War Damage Commission. The Committee will operate in the London Civil Defence Region and will plan and ensure due progress in the several parts of the programme for the provision of housing accommodation in the Region. This will include war damage repair and all other methods for increasing family accommodation whether by building, requisitioning, conversion or adaptation.

Temporary Housing Accommodation

In a Circular 74/45 dated 24 April 1945, addressed by the Ministry of Health to Housing Authorities it is stated that the Authority will be responsible for the repair and maintenance of their temporary houses.

LABOUR AND PERSONNEL

Training of Building Apprentices

A form of Prime Cost Contract has been agreed between the Ministry of Works and the National Federation of Building Trades Employers for the use of Local Authorities for work to be carried out by an Apprentice Master for the training of Apprentices. The Form is MOW/AT/4.

Reprints of Practice Notes

It has been decided, in view of the considerable demand, to reprint the Practice Notes each month on one side of the paper only so that members can cut them up, classify and file them in their own way.

The charge for the reprints will be five shillings for all Notes up to the completion of the current volume, from and including the Notes published in June. Members who want the notes should write to the Editor.

Review of Periodicals

1944-45—III, *concluded*

TOWN PLANNING & REPLANNING

BYGGMÄSTAREN (Stockholm), *1945 No. 1, pp. 2-3 :*
Education in community planning : an American project.

ARCHITECTURE CHRONICLE (Moscow), *1944 Nov., pp. 6-11 :*
The art of city building. Article by D. Arkin. Historical and contemporary.

ARCHITECTURAL REVIEW, *1945 Mar., pp. 67-72 :*
Social aspects of town planning. Article by Ruth Glass, surveying social science contributions to t.p. and soc. sci. technique ; neighbourhood and community plg. factors. Illusd. by Bethnal Green Survey.

PLAN (Schweiz. Zeitschrift für Landes-, Regional- und Ortsplanung, Zürich), *1945 Jan.-Feb.; pp. 20-1 :*
The area of towns. A statistical analysis of size and growth of small towns in Switzerland in relation to population.

ARCHITECTURAL RECORD, 1945 *Mar., pp. 71-3 :*
Architecture's place in city planning. Article by Joseph Hudnut reaffirming the value of the architect's contribution.

JNL., INSTN. OF MUNICIPAL AND COUNTY ENGINEERS, *1945 Mar. 6, pp. 240-50 :*
Town design. Paper by R. G. Narbeth, Deputy Engr. and Surveyor, Barnet. Æsthetic aspects.

JNL., TOWN PLANNING INSTITUTE, *1945 Jan.-Feb., pp. 40-9 :*
A factual basis for reconstruction. Paper by F. A. C. Maunder, Planning Officer, Portsmouth, on importance of basic factual survey ; vital statistics ; road pattern ; neighbourhood units.

ARCHITECTURAL FORUM, *1945 Jan., pp. 113-8 :*
New Haven, Conn., " Civic diagnosis " and Master plan by M. Rotival, Assocd. Prof. Plg., Yale Univ., with M. Meyer and G. Dudley. Incs. design for civic centre.

ARCHITECTS' JOURNAL, *1945 May 3, pp. 331-4 :*
Belfast : Review of Planning Commission's Report, by J. R. McKee [A.]. Illusd.

JNL., AUCTIONEERS' AND ESTATE AGENTS' INSTITUTE, *1945 April., pp. 182-7 :*
Plan for City of London. A. & E.A.I. memo to Court of Common Council.

ARCHITECT AND BUILDING NEWS, *1945 May 4, pp. 70-1 :*

BUILDER, *April 20, pp. 316-8 :*
City of London plan : Memo on the proposals, by the Chartered Surveyors' Instn.—R.A. Planning Committee comment on next p. of A. & B.N.

ARCHITECT AND BUILDING NEWS, *1945 May 4. p. 71 :*
City of London plan : Royal Academy Planning Committee's comments.

BUILDER, *1945 April 20, pp. 308-10 :*
Canterbury. Town planning scheme by Ch. Holden, reviewed by H. V. Lanchester. Illusd.

ARCHITECT AND BUILDING NEWS, *1945 April 6, p. 3 :*
Hastings development plan, by A. Trystan Edwards. " Outline " plan for holiday centre at Bulverhythe ; sea-front promenade and residential holiday accommodation for 7,000.

ARCHITECTS' JOURNAL, *1945 Mar. 1, 169-72 ;*
BUILDER, *Feb. 9, pp. 107-11 ;*
COUNTRY LIFE, *Feb. 23, pp. 330-1 ;*
OFFICIAL ARCHITECT, *Mar., 92-3 :*
Master plan for Bath, by Sir P. Abercrombie (Consultant), J. Owen (City Engr.) and H. A. Mealand (T.-p. Officer). Illusd. and reviewed. (C. L. :) One plan, views of model. (A.J. :) Art. by A. C. Bossom.

JNL., INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS, *1945 May 1, pp. 328-40 :*
Bath : Notes on " A plan for Bath," by J. Owens, City Engineer.

BUILDER, *1945 Feb. 23, pp. 150-1 :*
Wolverhampton. Replanning proposals. Illusd.

ARCHITECTS' JOURNAL, *1945 Feb. 1, pp. 97-100 :*
Durham plan, by Thomas Sharp, described and reviewed. Illusd.

TEKNISK TIDSKRIFT (Stockholm), *1944 Feb. 26, pp. 213-22 :*
Nedre Norrmalm planning scheme, Stockholm. Illusd.

ARCHITECTURAL FORUM, *1945 Mar., pp. 119-30 :*
Puerto Rico. Designs by Neutra for planning and building in depressed U.S. colony. Description of schemes and designs for large general hospital, village health centre, schools, community centres. An important reference on all types of bdg., with partic. ref. to tropical conditions.

PENCIL POINTS, *1944 Dec., pp. 86-94 :*
Portland, Oregon. Civic development plan. Report analysed.

ENGINEERING NEWS-RECORD, *1945 Feb. 8, pp. 135-8 :*
" Rebuilding our cities," by H. M. Lewis. Analysis of needs due to obsolescence, etc. ; local possibilities.

JNL., TOWN PLANNING INSTITUTE, *1945 Mar.-April, pp. 77-81 :*
Reconstruction under the Town and Country Planning Act, 1944, by H. M. Webb. Critical analysis of Act.

ARKITEKT (Istanbul), *1944 No. 9-10, pp. 210-8 :*
The Royal Academy London plan reviewed by J. M. Richards.

TOWN AND COUNTRY PLANNING, *1944-5 Winter, pp. 166-8 :*
Canonbury, London. Proposed re-development of the Canonbury estate of Marquis of Northampton. Article by J. A. F. Watson. Illusd.

JNL., INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS, *1945 Feb. 6, pp. 221-2 :*
Berwick-on-Tweed. Post-war planning and development. Extracts from paper by J. D. Bolton, Boro' Surveyor.

ARCHITECTURAL FORUM, *1944 Mar., pp. 107-11 :*
Isernia, Italy. Plan for reconstruction by J. C. Harkness and Guiseppe Tarra. Illusd. by plans and war-damage photos.

ARCHITECTURE CHRONICLE (Moscow), *1944 June-July (Nos. 6-7) :*
Notes on reconstruction of U.S.S.R. towns. Rostov-on-Don, Smolensk.

ARCHITECTURE CHRONICLE (Moscow), *1944 Oct., pp. 1-8, 15-16 :*
Leningrad reconstruction. Report by Baranov, chief architect. Alma-Ata reconstruction, note.

ARCHITECTURAL FORUM, *1944 Dec., pp. 117-22 :*
Reconstruction of Leningrad. The most detailed article yet, by John Hersey. Plans and views. Plan size doubled, population max. 3,500,000 (pre-w. pop. 1,150,000).

ARCHITECTS' JOURNAL, *1945 April 5, pp. 259-60 :*
Leningrad : note on reconstruction plan. Illusd.

ARKHITEKTURA S.S.S.R. (Moscow), *1944 No. 8, pp. 3-6 :*
Novorossisk reconstruction ; rept. by Iofan.

ARKHITEKTURA S.S.S.R. (Moscow), *1944 No. 8, pp. 3-6 :*
Voronezh reconstruction plan described by L. Rudnev and I. Tkachenko.

ARCHITECTS' JOURNAL, *1945 Feb. 15, pp. 133-6 :*
Voronezh replanned. Academician L. Rudnev and I. Tkachenko, architects. Illusd.

ARCHITECTURAL RECORD, *1945 Jan., pp. 58-63 :*
" City planning and the public mind " : commentary by Dean Hudnut on competition for improvement of Boston.

NATIONAL HOUSE BUILDER DIGEST, *1945 Feb., pp. 9-13 :*
Garden cities, satellite towns and the Greater London Plan. Article by R. L. Reiss. General description includes schematic diagram for residential and industrial communities, Leeds.

PENCIL POINTS, *1945 Mar., pp. 73-8 :*
" An American introduction to Howard's *Garden Cities of To-morrow*," by Mumford. Reassessment of Howard ideas and application in U.S., England and Germany. Reference to J. S. Buckingham.

HOUSING AND PLANNING NEWS-BULLETIN, *1945 April-May, pp. 13-5 :*
" After 40 years : progress at New Earswick." Note on the planning work of the Joseph Rowntree Village Trust. Illusd.

TOWN AND COUNTRY PLANNING, *1944-5 Winter, pp. 182-4 :*
New villages for Britain, by L. F. Easterbrook, with special ref. to villages for National Forestry workers.

ARCHITECTS' JOURNAL, *1945 April 5, pp. 261-2 :*
The distribution of industry. Article by Lord Balfour of Burleigh on current British problem.

TOWN AND COUNTRY PLANNING, *1945 Spring, pp. 20-3 :*
Planning and full employment by N. F. Cohen. Work of Medway Full-Employment Council. Industl. location.

SCOPE, *1945 Mar., pp. 29-37 :*
Location of industry. The industrialists' view of control.

ZONES, including RESIDENTIAL AREAS

TOWN AND COUNTRY PLANNING, *1945 Spring, pp. 10-19 :*
The country-belt principle : its historical origins, by F. J. Osborn. Anticipations of Howard's green belt in Biblical, classical, mediæval and modern worlds. Illusd.

ARCHITECTURAL RECORD, *1945 Feb., pp. 85-109 :*
Shopping terminals and stores. Building types study 98. Shop centres incl. " Grand Rapids parking plan " : large scale replanning of city centre. Article : Retail store and its design problems. Examples of recent U.S. stores. " Time-saver standards " of window lighting.

SCOPE, *1945 Mar., pp. 56-9 :*
" Too many shops ": plea by Prof. H. Levy, for national survey of shopping habits.

ARCHITECTS' JOURNAL, *1945 April 19, pp. 295-8 :*
Shops : their number and distribution. Article by Rachel Caro on methods of determining acreage for shops in new and reconstructed towns. Detailed analyses tabulated.

CALIFORNIA ARTS AND ARCHITECTURE (Los Angeles), *1944 Nov., pp. 26-9 :*

Commercial (shopping) centre, Linda Vista, Calif. Nat. Housing Agency scheme by Giberson & Smith. Fully illusd.

ARCHITECTS' JOURNAL, *1945 April 26, pp. 313-6 :*
Conversion of war-sites. Abstract of book by Assn. for Planning, *Adapting war-time sites to post-war uses.*

JNL., TOWN PLANNING INSTITUTE, *1945 Mar.-April, pp. 110-4 :*
Licensed houses and urban planning. Paper by J. S. Eagles. Types and location of public houses in planned areas.

ARKHITEKTURA S.S.S.R. (Moscow), *1944 No. 8, pp. 11-16 :*
Methods of planning small settlements (communities). Article by V. Semenov-Prozorovski. Detailed and illusd. analysis of various site lay-outs, incl. examples from U.S., Britain, etc.

ARCHITECTURAL DESIGN AND CONSTRUCTION, *1945 Jan., pp. 18-20 :*
Principles of lay-out design for housing estates. No. 7 in Practical planning of estates series, by S. Gale.

ARCHITECTS' JOURNAL, *1945 Mar. 1, pp. 179-80 :*
Honor Oak (L.C.C.) Estate : talk by L. E. White, Secy. of H.O. Community Assn., to A.P.R.R.

BYGGMÄSTAREN (Stockholm), *1945 No. 3, pp. 46-9 :*
Housing estate, Guldhedsområdet, Göteborg, by G. Wejke and K. Odeen. Community of 600 dwellings, small houses, terraces and flats, with community centre, communal garage, schools.

PENCIL POINTS, *1945 Jan., pp. 46-58 :*
Orchard Heights, Washington, F.P.H.A. housing project. Complete community of 2,900 families by Jones, Bouillon, Thiry & Sylliaasen. 4 dwelling types, bed-sitting rm., 1, 2 and 3 bedrms., with community centre, shops centre, child-welfare and recreation centre, school, hospital and theatre for 1,000, latter from designs by P. Belluschi, fire station. All but school and theatre illusd. and described. A most interesting scheme.

ARCHITECTURAL RECORD, *1945 Jan., pp. 64-70 :*
Victory Park housing scheme, Compton, Calif., by Wilson & Criley. 50 dwellings, school community building. Illusd.

SITE PLANNING

ARKHITEKTURA S.S.S.R. (Moscow), *1944 No. 8, pp. 7-10 :*
Reconstruction and the replanning of city blocks from the experience of planning works in Leningrad. Article by V. Kamenski. Site use.

ARKHITEKTURA S.S.S.R. (Moscow), *1944 No. 8, pp. 17-23 :*
The architecture of towns and house types. Article by Academician Arkin on co-ordinated street and "place" architecture. Illusd. author's sketches.

SOUTH AFRICAN ARCHITECTURAL RECORD, *1944 Dec., pp. 299-309 :*
A study of township lay-out, with particular reference to costs of services : article by T. B. Floyd, M.T.P.I. Detailed cost and efficiency analyses of 7 variant lay-outs of 50-acre site as neighbourhood unit.

ILLUSTRATED CARPENTER AND BUILDER, *1945 May 4, pp. 486, 7 :*
Planning for sunshine and health : calculating street widths and access to open spaces. 2nd part of Chadwick lecture by A. Trystan Edwards. Illusd.

HOUSE BUILDER AND ESTATE DEVELOPER, *1945 Jan., pp. 18-22 :*
Narrow *v.* wide front (small houses). Article by Myerscough. Illusd.

JNL., ROYAL ARCHITECTURAL INSTITUTE OF CANADA, *1945 Jan., pp. 8-12 :*
Site lay-out technique. Lay-outs of small houses. Article by W. Segal.

BUILDING, *1945 Feb., pp. 36-40 :*
Double-building frontages. [Houses two deep on one road.] Article by W. Segal on lay-out problems. Illusd.

BYGGMÄSTAREN (Stockholm), *1945 No. 5, pp. 80-4 :*
Site development of housing of the "Friluftstad" type by E. S. Persson. Plan type of terraces with alternate houses facing opposite ways. Illusd.

TRANSPORT

JNL., INDIAN INSTITUTE OF ARCHITECTS, *1945 Jan., pp. 33-4 :*
Lay-out of areas and design of roads : general principles. Memo by Bombay Joint Town Planning Committee.

STRUCTURAL ENGINEER, *1945 Feb., pp. 61-76 :*
Modern road design. Paper by A. J. H. Clayton.

PLAN : REVUE SUISSE D'URBANISME (Zürich), *1944 Oct., pp. 73-6 :*
Towns and roads. Article by E. Virieux on the trunk road problems in central and southern France.

JNL., INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS, *1945 April 3, pp. 271-306 :*
Road research. Paper by Dr. W. H. Glanville, Director, Road Res. Lab. Road materials, surfacing, traffic lines, curves, accidents. Bibliog.

JNL., INSTITUTION OF CIVIL ENGINEERS, *1945 Jan., pp. 149-54 :*
Traffic capacity of roundabouts at road intersections, by A. J. H. Clayton. Calculations.

JNL., INSTITUTION OF CIVIL ENGINEERS, *1945 Feb., pp. 210-7 :*
Clover-leaf loops on roads. Paper by D. F. Orchard, Ph.D. Mathematical factors in design.

COUNTRY LIFE, *1945 Feb. 2, pp. 204-5 :*
Lewes, Sussex : a solution of its traffic problem, by Walter Godfrey [*F.*]. Illusd.

COUNTRY LIFE, *1945 Mar. 2, p. 373— :*
High Wycombe : a traffic plan for High Wycombe : a threat to its Georgian architecture.

BUILDER, *1945 Feb. 2, p. 89 :*
Sheffield central area road plan, by J. M. Collie, City Engr.

JNL., INSTITUTION OF MUNICIPAL AND COUNTY ENGINEERS, *1945 May 1, pp. 313-27 :*
Sheffield : road plan for the central area. Paper by J. M. Collie, City Engineer. Illusd.

GARDENS

BUILDER, *1945 Mar. 9, p. 195 :*
Allotment lay-out ; winning competition designs.

JNL., INSTITUTE OF LANDSCAPE ARCHITECTS, *1945 April, pp. 3-8 :*
Top-soil conservation and re-use. Report of I.L.A. Committee.

JNL., TOWN PLANNING INSTITUTE, *1945 Jan.-Feb., pp. 55-9 :*
Maintenance of unenclosed places in neighbourhood development. Paper by M. J. Hellier. Cost of open-space maintenance.

JNL., INSTITUTE OF LANDSCAPE ARCHITECTS, *1945 April, pp. 11-13 :*
The design of churchyards. Article by F. C. Eeles, sec. Central Coun. for Care of Churches.

FORM (Stockholm), *1944 No. 10, pp. 180-1 :*
The Co-operative Society offices' roof garden. Garden on large city building roof.

PLAN : REVUE SUISSE D'URBANISME (Zürich) *1944 Oct., pp. 76-83 :*
Wind breaks in Switzerland. Article by O. Weber on the planting of wind breaks for shelter of villages, agriculture and industrial activity. Illusd.

JNL., INSTITUTE OF LANDSCAPE ARCHITECTS, *1945 April, pp. 8-11 :*
County parks for post-war planning. Article by D. Newman. Local nature reserves and playgrounds. Illusd.

Accessions to the Library

1944-45—III, *continued*

ARCHITECTURE, *included*

PROFESSIONAL PRACTICE, LOCAL GOVERNMENT, *concluded*

MINISTRY OF HEALTH 72.089 arch file 72.089

Licensing of building works in London and certain districts in the Home Counties. (Circular 47/45.)
leaflet dupl. typescript. 7″. 1945. R. (2).

With Suppt. A (Enclosure . . .), Control of civil building, Defence Regn. 56A— . . . Suppt. to Notes for guidance.
leaflet dupl. typescript. 8″ × 6½″. 1945. R. (2). 72.089

Civil building. Circulars 2871, 9/44 and 49/44. [Labour that of householder &c.] (Circular 50/45.)
leaflet dupl. typescript. 7″. 1945. R.

With Defence Regn. 56A, Control of civil building (Enclosure . . .).
leaflet dupl. typescript. 7¾″ × 6½″. 1945. 72.089 : 696/699

Licensing of building works in London and certain districts in the Home Counties. [Works where labour is mainly specialist.] (Circular 76/45.)
leaflet dupl. typescript. 7″. 1945. R.

CLARKE (JOHN J.) 352 (41/42)

The Local government of the United Kingdom.
12th ed. 8½″. xx + 967 pp. Lond. : Pitman. 1939. 15s. P.

BUILDING TYPES

(CIVIL)

Inf. file 725.11 (42.1) : 69.051.5

GREAT BRITAIN : PARLIAMENT—COMMITTEES. JOINT SELECT COMMITTEE OF THE HOUSE OF LORDS AND OF THE HOUSE OF COMMONS APPOINTED TO INQUIRE INTO THE ACCOMMODATION IN THE PALACE OF WESTMINSTER

Report. (H.L. 26. H.C. 64.) [Including Barry's design for buildings enclosing New Palace Yard.]
9¾″. 12 pp. + double pl. Lond. : H.M.S.O. 1945. 4d. P.

MINISTRY OF AGRICULTURE AND FISHERIES 725.35 : 632/635 box

Advisory leaflet :
181. Home storage of apples and pears.
leaflet. 8½″. Lond. : H.M.S.O. 1944. 1d. P.

Inf. file 725.35 : 637.4 (42.41 C)

Marketing leaflets :

No. 8. Cheltenham egg packing station. [M. of A. : Economics Division—Markets and Co-operation Branch.]

9¾″. 10 pp. text illus. Lond. : H.M.S.O. [1928.]

Presented by the Manager, Gloucester Marketing Society, Ltd.

U.S. : DEPARTMENT OF COMMERCE—CIVIL AERONAUTICS ADMINISTRATION 725.39

Airport design.

9¼″. 74 pp. text plans. Washington : Supt. of Docts. 1944. (15 c.) *Presented by the Department.* 725.39 : 626.8

Airport drainage design information.

dupl. typescript. 10½″ × 8″. text illus. 1942. *Presented by the Department.* × MS.

KING (E. PLATTON) 725.4 : 621

"Architectural considerations in the planning and design of a factory for the manufacture of machined parts." (Thesis for Final Examination, Dec.)

typescript & *Repr., some col'd.* 13″ 1944. *Presented by the Author.*

[ILLUMINATING ENGINEERING SOCIETY] Inf. file 725.4 : 696.9

Lighting reconstruction pamphlets :

No. 6. Making work lighter. The lighting of factories.

7½″. 12 pp. Lond. [1945.] R.

SOUTHMAYD (H. J.) *and* SMITH (GEDDES) *and others* 725.511

Small community hospitals. (Commonwealth Fund.)

Reprint. 8¼″. ix + 182 pp. New York : Commonwealth Fund ; Lond. : O.U.P. 1944. (11s. 6d.) R.

SLOAN (RAYMOND P.) 725.511 [729.1 + 729.1.018

Hospital color and decoration.

9½″. xvii + 253 pp. + pls. + ii pls. colour chart. Chicago : Physicians' Record Co. 1944. ($3.75.) P. × MS.

STANTIALL (H. J. G.) 725.519 : 618

The Design, construction and equipment of maternity units in general hospitals. (Thesis for Final Examination, Dec.)

typescript & *Repr. of D.*, some folding. 13″. 1944. *Presented by the Author.*

MINISTRY OF HEALTH 725.75 : 699.895 binder

Government evacuation scheme. Return of evacuees to London. (Circular 68/45.)

dupl. typescript. 13″. 1945.

With viii Appendices, 8¼″.

Government evacuation scheme. Re-housing of families evacuated from "go home" areas who have no homes to which to return. (Circular 69/45.)

dupl. typescript. 13″. 1945.

CAMERON (CHARLES) E.W. 725.733

The Baths of the Romans *&c. English ed.* [Earlier ed.] 1772 :

Russian trans. : Termy Rimlian *&c.* Perevod s angliiskogo [translated from the English] A. A. Voitov, V. K. Makarov i E. N. Iakobi. Redaktsiia G. I. Kotov i V. H. Taleporovskii. Kommentarii V. P. Zubov.

13½″. xiii + 96 pp., incl. some pls. ; pls., some with flyers, some folding. text illus. Moscow : Izdatel'stvo Vsesoiuznoi Akademii Arkhitektury. 1939.

Presented by the Academy of Architecture, through M. Victor Vesnin.

Later English ed. 1775 in Library.

WHITING (F. E.) 725.95 (42.35 B)

The Long Bridge of Bideford.

7¼″. 24 pp. n.p. [1945.] *Presented by the Author [F.].* (2).

725.95 : 624.2

MINISTRY OF WAR TRANSPORT, *formerly* MINISTRY OF TRANSPORT

Memorandum on bridge design and construction. (Memorandum No. 577.)

9¾″. 48 pp. + folding pl. text illus. Lond. : H.M.S.O. 1945. 1s. *Presented.*

(RELIGIOUS)

OZ (TAHSIN) 726.2 (496.11)

Mimar Mehmet Aga ve Risalei-Mimariye. (Arkitekt Yayinlari, No. 16.)

12″ × 9¼″. 27 pp. Istanbul : Cumhuriyet Matbaasi. 1944. *Presented* (3).

726.51 : 283 (06)

BROWN (J. R.) + 711.585 (42.3)

Number One Millbank. The story of the Ecclesiastical Commissioners. [Including housing policy, pp. 36ff.]

7½″. 62 (incl. iv) pp. Lond. : S.P.C.K. [19—.] *Presented by the Author.*

Inf. file 726.54 (42.12) : 69.05 : 3

BISHOP OF LONDON'S COMMISSION ON THE CITY CHURCHES

The City churches. Interim report *&c.*

pam. 8½″. Lond. : Press & Pubns. Board of Church Assembly. 1944. 1s. *Presented by the Commission.*

(EDUCATIONAL)

MINISTRY OF EDUCATION 727.1 : 34 binder

*Memorandum on the building regulations. Being the regulations . . . 1945, prescribing standards for school premises, . . . under . . . the Education Act 1944 (S.R. & O. 1945 No. 345).

9¾″. 25 pp. Lond. : H.M.S.O. 1945. 6d. *Presented,* & P. (6).

*Education, England and Wales. Regulations prescribing standards for school premises, 1945. The Regulations *&c.* (StatutoryRules and Orders 1945 No. 345.)

9¾″. 24 pp. Lond. : H.M.S.O. 1945. 6d. *Presented,* & P. (6).

With slip 7″, The M— of E— hereby notifies *&c.*

HOME OFFICE 727.1 : 699.81

Fire precautions in schools. 1945.

9¾″. 30 + (i) pp. + pls. Lond. : H.M.S.O. 1945. 1s. R. × MS.

GODFREY (J. A.) 727.112

The Modern elementary school group. A thesis *&c.* (Thesis awarded distinction in Final Examination, Dec.)

typescript & *Ink D., some coloured.* 10½″ × 8″. 1944. *Presented by the Author.*

727.112.21

NURSERY SCHOOL ASSOCIATION OF GREAT BRITAIN : [BUILDINGS ADVISORY] COMMITTEE

*Planning the new nursery schools. A survey of the essential features . . . for children between the ages of 2 and 7 years, by a Committee *&c.* Published by arrangement with the N— S— *&c.*

8¼″. 40 pp. + folding map. Bickley : Univ. of Lond. Press. 1945. 2s. 6d. R. & P. (2).

069 (41.1 E)

EDINBURGH : OUTLOOK TOWER, *museum and institution*

A First visit to the O— T—.

pam. 7½″. text illus. Edin. : Geddes & Colleagues. 1906.

[Appeal for Geddes Memorial.]

leaflet. 8½″. text illus. [Edin. After 1932.]

—Both presented by the Curator of the Tower, through Dr. Arthur Geddes.

GEDDES (PATRICK) 069 : 711.4

A Suggested plan for a civic museum and its associated studies. [Read 1906.] (*From* Sociological Papers, iii.)

9¾″. 44 pp. n.p. [190—.] (1s. 6d.) P.

727.8 : 902.5

U.S. : NATIONAL ARCHIVES (OF THE U.S.), *Washington*

Bulletins of the National Archives :

No. 6. Buildings and equipment for archives. [Papers by Louis A. Simon and others.] (Pubn. No. 44—21.)

9¼″. 32 pp. (separate and consec. paging). Washington. 1944. *Presented by the Department.*

(DOMESTIC)

Inf. file 728 : 696.92 : 691.6

GREEN'S READY-BUILT HOMES, *firm, Rockford, Illinois*

G— R— - B— H— presents The Solar home as created by George Fred Keck. *&c.*

11″ × 8½″. 12 pp. incl. covers. [Rockford, Ill. 1944.] R.

YORCHENKO (IURCHENKO) (P. G.) 728.03 (47.7)

Narodnoe zhilishche [dwellings of the people] Ukrainy.

10¼″. 87 pp. + (4) pls., 1 folding. Moscow : Gosudarstvennoe Arkhitekturnoe Izdatel'stvo Akademy Arckhitektury *&c.* 1941.

Presented by Mr. Wright Miller.

ST. PANCRAS HOUSING SOCIETY Inf. file 728.1 (06)

Housing. To care or not to care—that is the question.

leaflet. 8¾″. Lond. [1945.]

Inset in Journal of London Society (Feb.).

ELSAS (M. J.) 728.1 (42)

Housing before the war and after.

2nd ed. 8½″. xi + 95 pp. Lond. : Staples Press. 1945. 7s. 6d. R.

MADGE (JOHN) 728.1 (42)

The Rehousing of Britain. (Target for tomorrow. . . . Editor : Charles Madge.)

9½″. 64 pp. text illus. Lond. : Pilot Press. 1945. 4s. 6d. R.

MINISTRY OF HEALTH Inf. file 728.1 (42)
Permanent house programme. (Circular 66/45.)
leaflet dupl. typescript. 9″ × 7″. 1945. R. (2).
With Form A, Form B, dupl. t'pts, 13″.

MINISTRY OF RECONSTRUCTION Inf. file 728.1 (42)
Housing. (Cmd. 6609.) (March.)
9¾″. 8 pp. Lond. : H.M.S.O. 1945. 2d. R.
728.1 (06) box

NATIONAL HOUSING AND TOWN PLANNING COUNCIL 728.1 (42)
Housing the nation : ways and means *&c.* By John G. Martin.
pam. 10″ × 8″. Lond. [1945.]
Inf. file 728.1 (42)

R.I.B.A. : (HOUSING PRODUCTION) COMMITTEE
Housing production. Report of a Committee *&c.*
dupl. typescript. 13″. 1945.
With H— p—. The following *&c.* [summary], dupl. t'pt, 10″.

MINISTRY OF HEALTH
Inf. file 728.1 (42) : 69.021.15 [728.1 : 693.061
Temporary accommodation. [Delay in foundations to receive temporary houses, &c.] (Circular 23/45.) (Feb. 12.)
leaflet dupl. typescript. 8¾″ × 7″. 1945. R. (2).
Inf. file 728.1 (42) : 69.051.22
Preparation of housing sites. Pt. 1. Use of German prisoners of war. (Circular No. 90/45.)
dupl. typescript. 13″. 1945. R.
With P— of h— s—, Application for use . . (Form P.O.W. 1), dupl. t'p't., 13″ ; Advance preparation . . . Terms on which M. of W. will undertake work for local authorities, Memo., dupl. t'p't., 8¾″.
Inf. file 728.1 (42) : 69.051.22 [699.895 : 72.025.1
Housing. Acquisition of the sites of war-damaged properties. (Circular 34/45.) (Feb. 23.)
leaflet dupl. typescript. 13″. 1945. R. (2).
Inf. file 728.1 (42) : 69.051.22 [728.1 : 693.061
Temporary accommodation. [Delivery, services, roads and sewers availability.] (Circular 35/45.) (Feb. 26.)
leaflet dupl. typescript. 8¾″ × 7″. 1945. R.
Inf. file 728.1 (42) [728.1 : 693.061
Housing. Temporary accommodation. [Need for ordering specific numbers.] (Circular 89/45.)
dupl. typescript. 7″. 1945. R.
Inf. file 728.1 (42) [728.1 : 693.061
Temporary accommodation. (Circular 74/45.) (Certificates of handing over.—Maintenance of t— houses.)
With Appendix I, Certificate of handing over *&c.*, and II, M. of Works Surveyors.
3 leaflets dupl. typescript. 8½″ &c. 1945. R.

MINISTRY OF WORKS Inf. file 728.1 (42) [728.1 : 693.061 (73)
Emergency houses from the U.S.A. (Press notice.)
dupl. typescript. 13″. 1945.
With Temporary houses U.S.A., 2 sheets of drawings, *Repr.*
Press notices not normally catalogued.
Inf. file 728.1 (42) : 940.5344

FRY (DREW) (JANE B.), *Mrs.* MAXWELL FRY, *and* FRY (E. MAXWELL)
Housing after the war. (*From* Britain To-day, Jan.)
extract. pls. 9¾″. 1945.

[MINISTRY OF WORKS] 728.1 (42.19 N) : 693
*Demonstration houses. A short account of the d— h— & flats erected at Northolt by the M— of W—.
8½″. 76 pp. incl. pls. Lond. : H.M.S.O. [1944.] 1s. P. (3).

LIVERPOOL, *city* : HOUSING COMMITTEE 728.1 (42.72 L) box
Preliminary report of the City Architect and Director of Housing on housing and rehousing.
9½″. 75 pp. Liverpool. 1943. *Presented.*
728.1 (42.72 L) : 69.037.1
Report of City Architect and Director of Housing on housing : temporary accommodation.
9½″. 16 pp. Liverpool. 1944. *Presented.*
728.1 (42.72 L) [728.1 : 693.061
Report of City Architect and Director of Housing on housing : temporary accommodation, allocation and siting of bungalows.
9½″. 24 pp. Liverpool. 1945. *Presented.*
728.1 (42.72 L) [728.1 : 693
Report of City Architect and Director of Housing on housing : temporary accommodation, dwellings for narrow frontages.
9½″. 12 pp. Liverpool. 1944. *Presented.*
728.1 (42.72 L) [728.1 : 693.061] 711.6
Report of City Architect and Director of Housing on housing : temporary accommodation, the siting of bungalows.
9½″. 16 pp. Liverpool. 1944. *Presented.*

McGILL *University, Montreal* 728.1 (71) + 711.4/5 (71)
Housing and community planning. A series of lectures delivered at McGill University, . . . 1943— . . . 1944. . . . planned by the School of Architecture and the Committee on Extension Lectures . . . [and] the Government of the Province of Quebec. (McGill Monograph series, 4.)
9¼″. 210 pp. text illus. Montreal : the Univ. 1944.
Presented by the University.
728.1 (729)

[WEST INDIES : COMPTROLLER FOR DEVELOPMENT AND WELFARE]
Housing in the West Indies. (Development and welfare in the W— I—. [D— and W—] Bulletin No. 13.)
9½″. (vi) + 54 + iv pp. + (iv) folding pls. (paged). (printed Bridgetown, Barbados.) [1944.]
Presented by the Comptroller.

RATENSKY (SAMUEL) Inf. file 728.1 (73)
Housing half-a-million families : problems of American housing. A paper . . . in connection with the American Housing in War and Peace Exhibition. [Unpublished article.]
page proofs. 14″. 1944.
Inf. file 728.1 (73)

CONGRESS OF INDUSTRIAL ORGANIZATIONS (C.I.O.), *Washington* : DEPARTMENT OF RESEARCH AND EDUCATION
Good shelter for everyone. (Report by Committee on Housing and Post-War Planning Committee. Facts for action *series*. [Pubn. No. 103.])
Reprint. 7¾″. 24 pp. [Washington. 1944 or -45.] *Presented.*
728.1 (73) (06) + 711.4—163 (73) (06)

U.S. : SENATE—SPECIAL COMMITTEE ON POST-WAR ECONOMIC POLICY AND PLANNING—SUBCOMMITTEE ON HOUSING AND URBAN REDEVELOPMENT
Hearings before the Subcommittee . . . creating a Special Committee on Post-war Economic Policy and Planning. Pt. 6 : Housing and urban redevelopment.—Post-war economic policy and planning.
9¼″. (iii + 190) pp. + folding pls. Washington : Govt. Printing Off. 1945.
Presented by Mr. H. Bogner, Acting Housing Consultant, Mission for Economic Affairs, American Embassy.
728.1 (73) box
728.1 (73) : 940.5344] 014.3 + 711.4—163 : 940.5344] 014.3

U.S. : NATIONAL HOUSING AGENCY—OFFICE OF THE ADMINISTRATOR : DIVISION OF URBAN STUDIES, *afterwards* URBAN DEVELOPMENT DIVISION
Abstracts of selected material *&c.* Group IX.
dupl. typescript. 10½″. 1945. R. (2).

HANSON (EARL) *and* BECKETT (PAUL) 728.1 (73 LA) : 31
Los Angeles : its people and its homes. (John Randolph Haynes and Dora Haynes Foundation, *short title* Haynes Foundation, Los Angeles.)
repr. typescript, printed cover. 11¼″ × 8½″. (x) + 207 pp. + xiii maps, 1 folding. Los Angeles : the Foundn. 1944.
Presented by the Foundation.

AUSTRALIAN ARMY EDUCATION SERVICE 728.1 (94) box
This housing problem.
6 pams. : Pt. i : What has to be done : Chaps. [pams.] 1-3. Pt. ii : How shall we tackle it? Chaps. 4-6.
each 9¾″. n.p. [194—.]
Presented by Mr. Leslie M. Perrott [F.].
728.1 (73) box NHA
728.1 : 016

U.S. : NATIONAL HOUSING AGENCY—FEDERAL PUBLIC HOUSING AUTHORITY : PROPERTY AND ADMINISTRATIVE SERVICES DIVISION—LIBRARY
A Selected list of references on housing for the use of teachers and students. Compiled by Elizabeth L. Carey.
dupl. typescript. 10½″. 1945. *Presented.*

R.I.B.A. : LIBRARY Inf. file 728.1 : 016
Housing publications, *title of list 1.*—Notes on recent housing publications received by the Library, *title of list 2.*
Nos. 1 (Dec. 1944), 2 (Feb. 1945), 3 (Mar.), . . .
dupl. typescripts. 13″. 1944-45——.

MINISTRY OF HEALTH
Inf. file 728.1 : 69.037.1 (42)
Housing. Temporary accommodation. (Circular 13/45).
leaflet, dupl. typescript. 8¾″. 1945. R.
Enclosing Memorandum and t.p.
Inf. file 728.1 : 69.037.1 (42)
Temporary accommodation. [Gas and electricity appliances, regional officers, personnel incl. architect, water butts, water pressure, velograph, colour card.] (Circular 28/45.) (Feb. 20.)
leaflet dupl. typescript. 8¾″ × 7″. 1945. R. (2).

Inf. file 728.1 : 693.061 T + U
Temporary accommodation. [Change of plans for Uni-Seco and Tarran types.] (Circular 83/45.)
leaflet. 7¼″. 1945. R. (2).
With Temporary houses, Seco Mark 3,—Tarran Mark 3, leaflet of plans, 9¼″.

Inf. file 728.1 : 693.061 (44) (064)
FRANCE, *provisional government*: MINISTRY OF INFORMATION
Exhibition of French prefabricated houses. "Devastation and reconstruction." [At] R— I— of B— A— . . . 1945.
leaflet, dupl .typescript. 13″. 1945.

BROWN (DOUGLAS) Inf. file 728.1 : 711.585 (42)
An Englishman's home. (R[ed] F[lag] F[ellowship].)
7¼″. 26 pp. incl. front cover. + (4) pls. [Lond. 1945 or earlier.] *Presented.*

728.1 : 711.585 (94) + 711.4 (94)
OPPORTUNITY CLUBS FOR BOYS AND GIRLS, *organisation, Melbourne, Australia*
The Slums are still with us. An O— Clubs' publication.
9¾″. 64 pp. text illus. [Melbourne.] 1944. *Presented by the Organisation.*

MINISTRY OF HEALTH Inf. file 728.1 : 728.68 (42)] 31
Housing survey in rural districts. (Circular No. 67/45.)
leaflet. dupl. typescript. 9″ × 7″. 1945. R. (3).

728.1 : 728.68] 72.081.28
NORTHAMPTONSHIRE (*afterwards* AND SOKE OF PETERBOROUGH) FEDERATION OF WOMEN'S INSTITUTES
Cottages for rural workers.—Competition promoted by the N— F— *&c., text sub-heading.*
9¾″. 15 pp. text illus. [Northampton.] 1944. 1s. P.

Inf. file 728.3 (42.38 B) : 728.25] 72.025.23
SOCIETY FOR THE PROTECTION OF ANCIENT BUILDINGS *and* BATH PRESERVATION TRUST
Report and recommendations from the S— . . . in collaboration with the B— . . . on the preservation of terraced houses in Bath by adaptation *&c.*
dupl. typescript, *Repr. of D., Repr. of Map,* & *Phs.* (mounted), 13″, in folder. 1944. *Presented.*

Inf. file 728.54 [728 : 649
FRIENDS RELIEF SERVICE (SOCIETY OF FRIENDS)
Hostels for old people.
8½″. 30 pp. Lond. : Friends Book Centre. [1945.] 1s. 6d. P.

Inf. file 728.933.1
KITCHEN PLANNING CENTRE (LEVER *Bros. and* UNILEVER *Ltd.*), *London*
*The Planning of kitchens for efficient working. A report . . . for the use of the Ministry of Health, the M— of Works and Buildings, *&c.*
8¾″. 24 pp. text illus. Lond. [c. 1944.] R. & *presented by the Centre* (3).

KITCHEN PLANNING EXHIBITION, *London*, 1945 728.933.1 (064)
K— P— E—. (E. B. 105.) [Organised by Gas Industry, *journal*, and Jane Drew, Mrs. Maxwell Fry.]
pam. ob. 5¼″ × 8¼″. n.p. [1945.] R.

BRITISH STANDARDS INSTITUTION 69 (083.74)
B.s. :
728.933.1 : 729.9
1195 : Kitchen fitments and equipment. 1944. 2s.

DETAILS, CRAFTS

TRISTRAM (E. W.) 729.49.033.4/5 (42)
English medieval wall painting.
The twelfth century. With a catalogue by E. W. T— compiled in collaboration with W. G. Constable. Prepared with the assistance of the Courtauld Institute of Art and published on behalf of the Pilgrim Trust *&c.*
12½″ × 9¾″. xii + 165 + (i) pp. + front. + 90 + 15 pls. Lond. : Oxford U.P., for Pilgrim Trust. 1944. £10 10s. P.

FILIPPOV (A. V.) 729.69 (47)
Drevnerusskie izraztsy [ancient Russian ceramic tiles]. (*Summary in French*, Apercu historique . . .)
Vol. i only. pfo. 13½″. text and pls. Moscow : Vsesoiuznoi Akademii Arkhitektury. 1938. *Presented.*

TRAVELER IN FRANCE (A), *pseud.* Inf. file 729.8 : 726.6 (44)
The Cathedral windows of France, beginning with the XIIth century. *From* the American Society of the French Legion of Honor, A— S— Legion of Honor Magazine, Winter 1944-45.
extract. illus. 10″. 1945. *Presented by the Editor.*

ALLIED ARTS

FITZMAURICE (ROBERT) Inf. file 7.02 : 69
Craftsmanship in building. (Institution of Civil Engineers. Structural and building engineering division. Structural paper No. 8.)
8¼″. 17 pp. Lond. 1944. *Presented by the Institution* (3).

GAUNT (WILLIAM) 7.036.6.01
The Aesthetic adventure.
7¾″. 224 pp. + pls. text illus. Lond. : Cape. 1945. 10s. 6d. R.

MINISTRY OF HEALTH Inf. file 749 : 645] 949.5
Temporary accommodation—furniture. [Permits for utility f—.] (Circular 30/45.)
leaflet dupl. typescript. 8¾″ × 7″. 1945. R.
Enclosing BOARD OF TRADE, Utility furniture *&c.*

BOARD OF TRADE Inf. file 749 : 645] 949.5
Utility furniture and household furnishings. (Leaflet UFD/6 (Revised).)
leaflet. 10″. [1944.]
With Utility furniture and household furnishings. (Application Form UFD/1A (2nd revise).)
Enclosed in M. of H., Temporary accomm.—furniture.

BUILDING

Inf. file 69 (083.74) (931) (06)
NEW ZEALAND STANDARDS COUNCIL (*formerly* INSTITUTE, *q.v.*) (NEW ZEALAND *government*: DEPARTMENT OF INDUSTRIES AND COMMERCE)
Annual report for the year 1943-44. [Including Building standards, pp. 5-7.]
13½″. 14 pp. Wellington, N.Z. : Government Printer. 1944. R.

MINISTRY OF WORKS: LIBRARY Inf. file 69 : 016
Some recent official publications relating to building. (Communication No. 4.)
dupl. typescript. 13″. 1945. R.

69 : 37
dupl. to Inf. file
BUILDING APPRENTICESHIP AND TRAINING COUNCIL (MINISTRY OF WORKS)
Report : Second. (Dec. 1944.)
9¾″. 39 pp. + folding pl. Lond. : H.M.S.O. 1945. 9d. R. (2).

MINISTRY OF HEALTH 69 : 37
Scheme for the training of apprentices on special building works. (Circular 65/45.)
leaflet. dupl. typescript. 9″ × 7¼″. 1945. R. (2).

Inf. file 69 : 608.3 (083)
CHARTERED INSTITUTE OF PATENT INSTITUTES
The Register of patent agents *&c.*
10″. Lond. : Eyre & Spottiswoode. 1945. *Presented.*
Annual. (Pubd. in Feb.)

MINISTRY OF HEALTH 69 : 940.5 binder + 691 : 940.5
Economy in building material. [Relaxations of restrictions.] (Circular 55/45.)
leaflet. dupl. typescript. 7″. 1945. R.
Enclosing M. OF WORKS: COMMITTEE ON BUILDING MATERIALS STANDARDISATION, Review of economy memoranda (B.M.S.C./158).

69 : 940.5 binder + 691 : 940.5
MINISTRY OF WORKS: COMMITTEE ON BUILDING MATERIALS STANDARDISATION
Review of economy memoranda. (B.M.S.C./158.)
8½″. 8 pp. Lond. 1945. R.
Enclosed in M. OF H., Econ. in bldg. matl. (Circ. 55/45).
M. OF W. & P., Wartime buildings *&c.*, withdrawn.

STRUCTURAL ELEMENTS

MINISTRY OF HEALTH Inf. file 69.021.18 : 940.5
Hardcore. (Circular No. 22/45.) [Stocks available in London region.]
leaflet dupl. typescript. 8¾″ × 7″. 1945. R.

Inf. file 69.023.9 : 693.55] 693.06 : 389.6
REINFORCED CONCRETE ASSOCIATION *Ltd.*
The Standardisation of reinforced concrete structural members.
8½″. 8 pp. text illus. Lond. 1945. *Presented.*

× MS.
BALL (B. W. B.) 69.024 : 693.54
Steel roof structures. (Thesis awarded distinction in Final Examination, Dec.)
3 vols. in 1. typescript & *Ink D.* 13″. 1944. *Presented by the Author.*

Vol. i: The development of s. r. s.
" ii: Notes on design and construction.
" iii: The selection and analysis of structural types and conclusions.

691.11 (73) box

U.S.: DEPARTMENT OF AGRICULTURE 69.025.3 : 694.1] 620.19

Leaflets:

No. 56: Preventing cracks in new wood floors.

pam. 9¼". Washington: Supt. of Documents. 1930. (5 c.)

Presented by the Forest Products Laboratory.

BRITISH STANDARDS INSTITUTION 69 (083.74)

B.s.:

69.028.1 : 694.1

459: part 1: Panelled and glazed wood doors. 1944. 2s.

Replacing 459—1932 (orig. ed.), lost.

69.028.2 : 694.1 + 69.028.1

644: part 1: Wood windows and casement doors. 1945. 2s.

STRUCTURAL MECHANICS

69 : 5.0015

shelved 69.04 : 531

STOCKHOLM: INGENIÖRS VETENSKAPS AKADEMIEN

Handlingar (Proceedings):

Nr. 179. Studier rörande jonbytande fasta ämnen [solid materials]. Av Olof Samuelson.

9½". 166 pp. Stockholm: Generalstabens. 1945.

Presented by the Institute.

shelved 69.04 : 531

Nr. 178. Measuring stresses and deformations in solid materials. *&c.* By Nils Hast.

9¼". 164 pp. Stockholm: Generalstabens. 1945.

Presented by the Institute.

69 (083.74) box + 72.08 : 34 (083.74)

BRITISH STANDARDS INSTITUTION

British standard code of practice: (Ministry of Works: Codes of Practice Committee *&c.*)

69.042

CP 4: Code of functional requirements of buildings (classification code). Chapter V: Loading. (Comprehensive scheme of codes of practice for building.)

pam. 8¼". Lond. 1944. 2s. R. (2).

BUILDING PRACTICE AND INDUSTRY

LABOUR RESEARCH DEPARTMENT 69.088 : 352

Direct building. A study of building by direct labour under local authorities, *&c.* [Assisted by John Burns and A. [malgamated] U. [nion of] B. [uilding] T. [rade] W. [orkers] Research Department.]

8½". 74 pp. Lond. 1929.

Presented by the Amalgamated Union.

MATERIALS

ENGINEERING MATERIALS ANNUAL 691 : 62 (058)

E— m— a—. 1944. H. H. Jackson, editor. (Development reference annuals *series.*) [Arts. by H. H. J— and others.]

8". 106 pp. Lond.: Paul Elek. [1944 or -45.] 8s. 6d. P.

U.S.: DEPARTMENT OF AGRICULTURE—FOREST PRODUCTS LABORATORY 691.11

Wood handbook. Basic information . . . as a material of construction with data *&c.*

Revised ed. 9¼". 326 pp. + 6 pls. Washington: Supt. of Documents. 1940. (50c.) P.

691.11 (73) box

691.11 + 691.11 (73)

U.S.: DEPARTMENT OF AGRICULTURE—FOREST SERVICE: FOREST PRODUCTS LABORATORY

[Dupl. typescript pubns.:]

Nos. R 6, [82, 149, 761], 919, 1025-6, [1053, 1059], 1099, 1118, [1127, 1169, 1203], 1220, [1232, 1237]. (*Those in [ ] have series-numbers in text only.*) [Some with authors' names, F. L. Browne and others.]

(Some, Revised eds.) 17 dupl. typescripts, printed covers. 10¼" × 7¾". (some illus.) 1928, 1934-40; (revised eds.) 1933, 1935, 1938, 1944.

Nos. R 1025-6, 1059 and 1099 in series already in Library, with different fronts, and catalogued individually under titles.

Including:

No. R 6: Some causes of blistering and peeling of paint on house siding. Revised ed. 1933.

[82]: The prevention of decay of wood *&c.* 1928.

149: Wood preservatives. Revised ed. 1944.

919: Preservative treatment of window sash and other millwork. Revised ed. 1938.

[1053]: Behavior of house paints on different woods. 1934.

1118: Experiments in fireproofing wood. 5th progress rept. 1935.

[1127]: The program of paint maintenance *&c.* 1937.

[1169]: Standard terms for describing wood. 1938.

Technical notes:

Nos. 101, 119, 131, 149, 166, 180, 181, 186, 195, 214-5, 218, 222, 228, 233-4, 236, 240-1, 243, 247; Nos. B-11, 14; D-5; F-13, 15, 33. (Some, Revised eds.) 27 leaflets or pams. (some illus.) Madison, U.S. [19—] 1930-33, 1940-41; (revised eds.) 1931-36, 1940, 1942-43.

Including:

691.598 : 016 + 691.11 : 684.52

No. 195: Some books on paints and varnishes and wood finishing. Revised ed. 1935.

691.1 (083.72)

No. 240: A hundred definitions pertaining to wood and other forest products. 1932.

—Both presented by the Laboratory.

THUNELL (BERTIL) 691.11 + 691.11 : 620.19

Trä [timber], dess byggnad och felaktigheter [defects]. . . . i samarbete [co-operation] med Lennart Bergvall och Erik Dahlberg *&c.* (Byggstandardiseringen, Stockholm.)

11¾". 101 (103—2) pp. text illus. Stockholm: Byggstandardiseringen. 1945. P.

691.11 (73) box

U.S.: DEPARTMENT OF AGRICULTURE 691.11 : 5.0015 (73)

Misc. pubns.:

No. 306: The Forest Products Laboratory. A brief account of its work and aims.

9½". 33 pp. Washington: Supt. of Documents. 1938. (15 c.)

Presented by the Laboratory.

691.11 (73) box

AMERICAN WOOD-PRESERVERS' ASSOCIATION 691.11 : 620.19

Decay in buildings. [Report.] By C. Audrey Richards.

pam. 7¾". text illus. [1932 or -33.]

Presented by the Forest Products Research Laboratory.

COATON (W. G. H.) Inf. file 691.11 : 620.193.82] 699.878

The Harvester termite. (*From* Farming in South Africa, May 1943.) (Reprint No. 43.)

pam. 9½". n.p. [1943 or -44.]

Presented by the Division of Entomology, Pretoria (2).

SMIT (BERNARD) Inf. file 691.11 : 620.193.82] 699.878

Termites in farm lands and gardens. (*From* Farming in South Africa, Dec. 1943.) (Reprint No. 123.)

leaflet. 9½". n.p. [1943 or -44.]

Presented by the Author, Chief of Division of Entomology, Pretoria (2).

Inf. file 691.11 : 620.193.82] 699.878

UNION OF SOUTH AFRICA (UNIE VAN SUD-AFRIKA): DEPARTMENT OF AGRICULTURE AND FORESTRY—DIVISION OF ENTOMOLOGY, *Pretoria*

Termites in buildings. (*From* Farming in South Africa, Oct.) (Reprint No. 86.)

leaflet. 12¼" × 9¾". n.p. 1941. *Presented by the Division* (2).

With Termite pump, leaflet *Repr.*

BRITISH STANDARDS INSTITUTION 69 (083.74)

B.s.:

691.11 [69.08 : 389

940: part 1: Grading rules for stress-graded timber *&c.* 1944. 2s.

PARKER (T. W.) Inf. file 691.32

Recent developments in lightweight concrete. A paper read . . . Architectural Science Board *&c.* (*From* Jnl. R.I.B.A., Dec.)

11" × 8½". (5) pp. n.p. [1944.]

Presented by the Bg. Research Station (3).

BRITISH STANDARDS INSTITUTION 69 (083.74)

B.s.:

691.322 + 691.322.3

882, 1198, 1199, 1200, 1201: Concrete aggregates and building sands from natural sources. 1944. 5s.

GLOAG (JOHN) 691.335 : 7.02

Plastics and industrial design. . . . With a section on the different types of p—, their properties and uses, by Grace Lovat Fraser.

8½". 166 pp. incl. pls. text illus. Lond.: Geo. Allen & Unwin. 1945. 10s. 6d. R.

Inf. file 691.54 : 674.81/82

NATAL UNIVERSITY COLLEGE: BUILDING MATERIALS RESEARCH GROUP

Data sheets:

No. 1. Comments on sawdust-cement.

typescript. 13". [c. 1944.] R.

BRITISH STANDARDS INSTITUTION 69 (083.74)

B.s.:

691.555

1191: Gypsum and anhydrite building plasters. 1944. 2s.

CONSTRUCTION, INCLUDING PREFABRICATION

CHAPMAN (RONALD) *and* PERRY (RAYMOND) 693.06 : 728.1
A Report on the engineering industries and the rebuilding programme. (Engineering Industries Association.)
9¾″. 35 pp. text illus. n.p. [1945.]
Presented by Mr. Chapman [A.].
Inf. file 693.061

ROYAL INSTITUTE OF THE ARCHITECTS OF IRELAND
Prefabrication. Report of a committee *&c.*
8½″. 19 pp. Dublin. [1945.] *Presented.*

BRITISH STANDARDS INSTITUTION 69 (083.74)
B.s. :
693.068.33 : 691.32
1197 : Concrete flooring tiles and fittings. *&c.* 1944. 2s.

FREEMASONRY 693.1 : 366.1
Early masonic pamphlets. Reprinted and edited by Douglas Knoop, G. P. Jones, and Douglas Hamer. (Univ. of Manchester, Pubns., No. cclxxx, vii.)
8½″. 346 pp. Manchester : U.P. 1945.
Presented by Prof. Knoop [Hon.A.].

AKADEMIIA ARKHITEKTURY S.S.S.R. 693.1 : 691.555 : 553.635
Zhilye doma i obshchezhitiia iz gipsa [houses and hostels in gypsum]. Rabochie chertezhi. (Stroitel'stvo poselkov iz gipsa silami naseleniia *series*, ii.)
10″. 43 pp. + (3) folding pls. Moscow : Gosudarstvennoe Arkhitekturnoe Izdatel'stvo *&c.* 1942.
Kommunal'nye zdaniia iz gipsa [communal dwellings in gypsum]. Rabochie chertezhi. *&c.* (Stroitel'stvo poselkov iz gipsa silami naseleniia *series*, iii.)
10″. 85 pp. + (15) folding pls. text illus. Moscow : Gosudarstvennoe Arkhitekturnoe Izdatel'stvo *&c.* 1942.
—Both presented by Mr. Wright Miller.

DAVEY (NORMAN) Inf. file 693.51
Concrete : its appearance and durability. A paper read . . . Architectural Science Board *&c.* (*From* Jnl. R.I.B.A., Jan.)
11″ × 8½″. 8 pp. n.p. [1945.]
Presented by the Building Research Station (3).

REYNOLDS (T. J.) *and* KENT (L. E.) 693.54
Structural steelwork for building and architectural students.
5th ed. 8½″. xii + 362 + (2) pp. + pls. + (x) diags., mostly folded. text illus. Lond. : Engl. Univs. Press. 1945. 12s. 6d. P.
3rd ed. 1942 and earlier eds. in Library.

ABELES (P. W.) Inf. file 693.55
Fully and partly prestressed reinforced concrete. (*From* Jnl. of American Concrete Institute, vol. 16, No. 3, Jan. Part of Proc. . . . , vol. 41.)
9″. (34 pp.) Detroit. [1945.]
Presented by Dr. Abeles, M.I.STRUC.E., the author.

BRITISH STANDARDS INSTITUTION 69 (083.74)
B.s. :
693.56 : 693.068.2 : 666.15
1207 : Hollow glass blocks. 1944. 2s.
691.11 (73) box

[TIMBER CONSTRUCTION : LEAFLETS] 694.1
[By R. F. Luxford, L. V. Teesdale, T. R. C. Wilson. Reprints *from journals.*]
3 leaflets. 10½″ × 8″. [c. 1935.]
Presented by the Forest Products Laboratory.

SANITARY SCIENCE AND EQUIPMENT, PROOFING

Inf. file 696.1 : 699.865 (085)

ROSS (S. GRAHAME) *Ltd., Slough*
"Zeross" division. List of person[n]el attending conference and tests on . . . anti-burst valve *&c.*
typescript, *Reprs.*, & trade pams. in pocket. [1945.]
Presented by the firm.
696.1 : 728.1

LEAD INDUSTRIES DEVELOPMENT COUNCIL : TECHNICAL INFORMATION BUREAU
*Report on plumbing for low-cost housing.
11″ × 8½″. 28 pp. incl. 16 pls. (backed). Lond. [1945.] R. (2).

BRITISH STANDARDS INSTITUTION 69 (083.74)
B.s. :
696.11 : 621.646.6
1010 : Water taps : bib pillar globe and stop. 1944. 2s.
697 : 662.5/9 binder

MINISTRY OF FUEL AND POWER : COMMITTEE ON THE EFFICIENT USE OF FUEL
Fuel efficiency bulletins :
696.11 : 628.1
No. 39. Water treatment. (F.E.C. 313.)
8¼″ × 6½″. 12 pp. Lond. 1945. R.

BRITISH STANDARDS INSTITUTION 69 (083.74)
B.s. :
696.12 : 693.068.34] 69[illegible]
1194 : Concrete porous pipes for under-drainage. 1944. [illegible]s.
696.12 : 693.068.34] 6[illegible]
1196 : Clayware field drain pipes. 1944. 2s. [illegible]
696.121 : 693.068.34] 693.54
460 : Cast iron spigot and socket rainwater pipes fittings and accessories. 1944. 3s. 6d.
696.129 : 691.7[illegible]
1184 : Non-ferrous (excluding lead) traps and wastes. 1944. [illegible]s.
69 (083.74) box + 72.08 : 34 (083.74)
British standard code of practice : (Codes of Practice Committee *&c.* (Ministry of Works).)
696.2 : 693.068.34
CP : 1945. Installation of gas service pipes. (General series code 3.421.)
(Draft for comment subject to revision. 3rd proof CP (B) 434.)
8½″. Lond. 1945. 2s. R. (2).
696.2 : 665.7.9
CP : 1945. Gas metering and consumers control. (General series code 3.4211.)
(Draft for comment subject to revision. 3rd proof CP (B) 435.)
8½″. Lond. 1945. 2s. R. (2).
696.2 : 693.068.34
CP : 1945. Gas installation pipes. (General series code 3.422.)
(Draft for comment subject to revision. 3rd proof CP (B) 436.)
8½″. Lond. 1945. 2s. R. (2).
696.92 [728 + 727.1
CP. : Interim code of functional requirements for dwellings and schools (classification code). Chapter I (A) : Daylight. (Comprehensive scheme of codes of practice for building.)
(Draft for comment. Subject to revision. Fifth proof CP (B) 327.)
1944. 2s.

BILLINGTON (N. S.) Inf. file 697
Some aspects of the heating of rooms and buildings. (*From* Chemistry and Industry, Nov. 4, No. 44.)
leaflet. 11″ × 8½″. 1944.
Presented by the Bg. Research Station (3).

MOLLOY (E.), *editor* 697 + 697.9
*Principles and practice of heating and ventilating. (Newnes' Books on building and allied subjects, *or* Bldg. practice series.)
9″. viii + 312 pp. + folding pl. text illus. Lond. : Newnes. 1945. £1 1s. R. & P.
69 (083.74) box + 72.08 : 34 (083.74)

BRITISH STANDARDS INSTITUTION
British standard code of practice : (Codes of Practice Committee *&c.* (Ministry of Works).)
697 : 643.3] 696.2
CP : 1945. Gas cooking installations for single family dwellings. (General series code 3.4234.)
(Draft for comment subject to revision. 3rd proof CP (B) 462.)
8½″. Lond. 1945. 1s. P.

PARKER (A.) Inf. file 697 : 662.66] 697.8 : 620.193.53
Coal in relation to atmospheric pollution. A Chadwick public lecture . . . 1945.
dupl. typescript & *Repr.* chart. 13″. [1945.]
Presented by the Director of Fuel Research.
69 (083.74) box + 72.08 : 34 (083.74)

BRITISH STANDARDS INSTITUTION
British standard code of practice : (Codes of Practice Committee *&c.* (Ministry of Works).)
697 : 696.2
CP : 1945. Space heating by means of independent gas appliances (single family dwellings). (General series code 3.4233.)
(Draft for comment subject to revision. 3rd proof CP (B) 437.)
8½″. Lond. 1945. 2s. R. (2).

COAL UTILISATION JOINT COUNCIL 697 : 728.1
The Newer heat plans for housing.
10½″. 24 pp. text illus. Lond. 1945. 2s.
Presented by the Council.

MOLLOY (E.), *editor* 697.4
*Hot-water engineering. (Newnes' Books on building and allied subjects. N— "Building practice" series.)
9″. viii + 320 pp. text illus. Lond. : Newnes. 1945. £1 1s. R. & P.

BRITISH STANDARDS INSTITUTION 69 (083.74)
B.s. :
697.46
699 : Copper cylinders for domestic purposes. Grades 1, 2 and 3. 1944. 2s.

697.81 : 696.2] 693.068.34 [691.227.6 : 691.54

567 : Dimensions and workmanship of asbestos cement spigot and socket flue pipes and fittings for gas appliances. 1945. 2s.
69 (083.74) box + 72.08 : 34 (083.74)

British standard code of practice : (Codes of Practice Committee *&c.* (Ministry of Works).)
698.9 : 621.57

CP : 1945. Installation of gas operated refrigerators. (General series code 3.4235.)

(Draft for comment subject to revision. 3rd proof CP (B) 459.)
8½″. Lond. 1945. 1s. P.

BILLINGTON (N. S.) Inf. file 699.86

The Thermal insulation of buildings. (. . . paper . . . London section of the Institute of Fuel.)
12″. 9 pp. Lond. 1944.
Presented by the Building Research Station (3).
Inf. file 699.878 : 693.2

AUSTRALIA *Commonwealth* : COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH—DIVISION OF FOREST PRODUCTS

Trade circulars :

No. 44. Termite (white ant) proof construction. For brick buildings in Adelaide, South Australia.
Reprint. 9½″. 14 pp. Melbourne. 1939 (1943). *Presented.*

(A.R.P., WAR DAMAGE, INCLUDING REPAIR)
699.895 : 72.025.1 arch file

WAR DAMAGE COMMISSION 699.895 : 72.025.1]`347.434

Practice notes. . . . matters arising out of the administration of . . . the W— D— Act, 1940 :
First series [issue].
2nd ed. : . . . W— D— Act, 1943.
pam. 9¾″. Lond. : H.M.S.O. 1945. 9d. R.
1st ed. 1942.
(series, one set) Inf. file 699.895 : 72.025.1] 69.059.2
(dupl. set) 699.895 : 72.025.1 arch file

DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH : BUILDING RESEARCH

Repair of damaged buildings :

Note No. 1.—Introduction to the repair series.
pam. 10″. Garston. 1944. gratis. R. (4).
(one copy) Inf. file 693.54 [699.815 : 614.84] 69.059.2

Note No. 2.—Repair of structural steelwork damaged by fire.
pam. 9¾″. Garston. 1944. gratis. R. (4).
(one copy) Inf. file 698.1 : 694] 69.059.2

Note No. 3.—Restoration of paintwork on wood.
pam. 9¾″. Garston. 1944. gratis. R. (4).
(one copy) Inf. file 693.625 : 69.059.2

Note No. 4.—Repairs to stucco and rendering.
pam. 9¾″. Garston. 1944. gratis. R. (4).
69.024.5 : 691.155/161] 69.059.2

Note No. 5.—Repairs to asphalt mastic and felt roofs.
pam. 9¾″. Garston. 1944. gratis. R. (2).
698.1 : 693.54

No. 7. Restoration of paintwork on steel.
leaflet. 10″. Garston. 1944. R. (3).
69.022 : 620.197.8

No. 8. Removal of smoke and oil stains from walls.
leaflet. 10″. Garston. 1945. R. (4).
693.621 : 69.059.2

No. 10. The repair of internal plasterwork.
10″. 5 pp. Garston. 1945. R. (4).
699.895 : 72.025.1 arch file
699.895 : 72.025.1] 728 : 69.059.2 (42.2 + 42.5/6)

MINISTRY OF HEALTH

Repair of war damaged houses in certain districts in the Home Counties. (Circular 60/45.)
leaflet, dupl. typescript. 9″ × 7″. 1945. R. (2).

SOCIAL SCIENCE, INCLUDING ECONOMICS

This is a new section of the classification

CLAPHAM (J. H.) 33 (42) (09)

An Economic history of modern Britain.
Vols. [i] & [iii] (*numbers on cover titles*) only :
[i] : The early railway age. 1820-1850. 2nd ed., reprint (corrected). 1930 (1939).
[iii] : Machines and national rivalries (1887-1914) with an epilogue (1914-1929). 1938.
9¼″. Camb. : u. p. 19—.

TOPOGRAPHY

STAMP (L. DUDLEY) *and* BEAVER (S. H.) 91 (41/42) : 33

*The British Isles. A geographic and economic survey. With contributions by the late Lord Stamp and Dora K. Smee.
3rd ed. reprint. 8½″. xii + 719 pp. text illus. Lond., &c. : Longmans. 1941 (1944). £1 10s. P. (2).

PLANNING, RECONSTRUCTION (physical & sociological)
Inf. file 71 : 3

CHURCH OF ENGLAND : CHURCH ASSEMBLY (*formerly* NATIONAL A— OF THE C— OF E—)—SOCIAL AND INDUSTRIAL COMMISSION

The Church and the planning of Britain. Report of the S— *&c.* (C. A. 753.)
pam. 8½″. Lond. : Press & Pubns. Board of the Church Assembly ; S.P.C.K. [1944.] 2s. P.
71 : 3 arch files
71 : 3] 026 (44) (42.1)

FRANCE : MINISTERE DE LA RECONSTRUCTION ET DE L'URBANISME—MISSION DE LONDRES, *London*

Liste des ouvrages de la bibliothèque génerale. (Jan.)
dupl. typescript. 13″. 1945.

Liste *&c.* [Suppts., 2 :] Février. [Issued Mar.]
dupl. typescript. 13″. 1945.
Presented by the Secretary-General.

(To be continued)

Correspondence

FROM THE PRESIDENT OF THE AMERICAN INSTITUTE OF ARCHITECTS

1741 New York Avenue, N.W.
Washington 6, D.C.
28 July 1945.

To Mr. Percy Thomas, President, R.I.B.A.

Dear Mr. Thomas,

This is in acknowledgment of your cordial and welcome note of 27 June. Your expression of good wishes and confidence are greatly appreciated.

The long existing friendly relations between the Royal Institute of British Architects and the American Institute of Architects are a real source of satisfaction, not to say pride, to us on this side of the Atlantic.

I am, with best regards,
Sincerely yours,
JAMES R. EDMUNDS, Jr.,
President.

ARCHITECTURAL EDUCATION

The Editor, THE JOURNAL, R.I.B.A.

100 Easton Street,
High Wycombe.
7.8.45.

DEAR SIR,—I have read Professor Budden's important lecture on Architectural Education with great interest, and have particularly noted his comparison between Architectural and Medical training.

It seems to me that one very important point was missed, both in the lecture and in the discussion which followed.

The modern medical student learns the elements of anatomy and physiology from lectures and text-books, but by far the most valuable part of his knowledge of such subjects is gained by his opportunities of actually cutting up bodies. While he may learn much of medicine and surgery in classes and lectures, the real value of his "school" course to him consists in his being able to study cases with which he is actually brought into contact in hospital, cases far more numerous and varied than those he would meet in apprenticeship to a general practitioner.

In the case of a Student at an Architectural School, however, the reverse is the case, and his real contact with the actual work of his profession may be limited to six months' experience towards the end of his five years' course.

I am a product of the "bad old days" when the normal way of entering the architectural profession was by means of a period of pupilage or apprenticeship to a man in practice. When I began to practice myself, realising what I had missed in my training, I advised boys who wanted to come into my office that the better way of becoming an architect was by the road of the "Schools." Later on I considerably modified this view, and am now convinced that pupils who in addition to being brought into actual contact with work in the right type of busy office, also work as part-time students at a recognised school will be better equipped for the work-a-day world of to-day than many of our school-trained men.

Again Professor Budden wants the schools staffed with more "full-time" professors, lecturers and teachers, who should also be permitted to practice. If they are "full-time" members of the staff of a school when do they attend to the work of their practices?

Is not the success of our Medical Education mainly due to the fact that the members of hospital staffs are actually doing their work under the eyes of, and with the help of students whom they are training to become their successors?

I suggest, therefore, that we should aim a greater employment in the schools of men mainly engaged in practice, who cannot only instruct their students but show them how to solve the problems which actually arise day by day in architectural work.

Faithfully yours,
E. A. L. MARTYN [*F.*].

Obituary

JOHN KEPPIE, R.S.A. [Retd. *F.*]

Mr. A. G. Henderson writes:

There were many competent architects practising in Glasgow in the early 1880's. One of the ablest was James Sellars, the designer of the St. Andrew's Halls, Wellington Church and many other buildings in Glasgow and elsewhere. John Keppie was his pupil and assistant and this association was the principal formative influence in Keppie's architectural life.

Sellars' work, apart from its other masterly qualities, was always remarkable for its flexible and refined detail and for its use of sculptural motifs; similarly with Keppie detail was always important, and I think that the Sellars influence may have accounted for his lifelong interest in sculpture and sculptors.

His interest in the arts was not, however, confined to architecture and sculpture. Keppie was a contemporary of, and on terms of intimacy with, most of the painters who formed the famous Glasgow School.

In his spare time and holidays he was an assiduous sketcher in pencil and water-colour and he exhibited regularly at local exhibitions.

It is sometimes difficult to assess the individual work of architects who are working in partnership. Mr. Keppie's first partnership was with Dr. John Honeyman. This was an association of a young man with a mature and able practitioner, but it is clear that they worked as individuals rather than as a team and that in his work of this period he was more influenced by Sellars than by Honeyman.

C. R. Mackintosh joined the firm about the end of last century and the work of the individual partners became even more individual. Mackintosh was an assistant with the firm for some time prior to being assumed as a partner, and it is natural, therefore, that traces of his original and questing genius should be seen in Keppie's work, notably in the tower of the *Glasgow Herald* buildings in Mitchell Street.

Dr. Honeyman retired at the beginning of this century and thereafter Keppie and Mackintosh worked almost entirely, in an architectural sense, as individuals—Mackintosh blazing the trail for the "modernist" and Keppie upholding the traditional outlook. This, I need scarcely say, was a highly stimulating and provocative situation for the members of their staff who at times were called on to work for either partner.

Of the later work of the firm after I joined Mr. Keppie, a period which covered the interval between the two wars, I can, of course, speak with more knowledge. Without reservation I can say that I found his mature judgment and his sound traditional taste invaluable, withal, he was tolerant—perhaps due to his association with Mackintosh—of the "modern" outlook and deeply interested in architectural education and particularly in its co-ordination with the other arts. His work as a governor and, for five years, as chairman, of Glasgow School of Art, was to him a labour of love, and apart from this he took a lively interest in any young artist of promise. He had the highest ideal of professional probity; from a purely personal point of view I could not have been more fortunate in a professional partnership than with John Keppie.

H. V. ASHLEY [*F.*]

Mr. F. Winton Newman writes:

I find it a sad task to write of one with whom I have been in such close association for so many years. Naturally, my thoughts turn to those days when I first met Ashley—this was in 1897, when he had a room in T. E. Price's set of offices at 10 Gray's Inn Square, and I was just across the landing working for Walter Millard, a dear friend of us both for many years.

Ashley had served his articles with Dunn & Watson, and after some experience in offices such as Lorimer's and Belcher's, he was striving to make a practice of his own and helping things along with work for T. E. Price, Frank T. Baggallay and others.

I think it must have been some time later when I was with Ernest Newton that Ashley suggested we should combine our efforts on "Competitions." This we did at the usual expense of late hours and hard work, but for some time our successes, if we may call them so, were limited to "premiums," and it was not until 1907 when our first real success came along in the winning of the competition for the Birmingham Council House extension. It was then we took the plunge and entered into a definite partnership and founded a practice which has lasted for nearly 40 years.

Perhaps I have been too close to Ashley for so long, and his death is so recent, that it is difficult for me to look upon our years together in their proper perspective. Partnerships are much like taking a wife, save that they may be severed at will, and the fact that our own has lasted so long is proof of kinship of spirit even if there has been divergence of views at times, but that is natural and even beneficial in any partnership, for it is the balance o output which makes for happiness and success.

All through these years, notwithstanding the almost continuous pressure of other work, Ashley never lost his zest for competitions, both as a competitor and an assessor, and the results of his judgment in the latter capacity serve to show the soundness of his awards.

As for the varied work which has passed through our hands during these years, as his partner I would pay tribute to the value of his knowledge and experience, and to the impartial care and attention he gave to everything, large or small. His ability in planning, particularly hospital planning, was of a high order, and his judgment in the carrying out of building contracts of all kinds was sound to a degree. His work for the R.I.B.A., his intense interest in the well-being of the profession, is so well known that I would only say that it was really part of his being.

Ashley's two great interests in life were the Practice of Architecture, in capital letters, with a strong leaning towards administration, and his love and knowledge of Freemasonry, and I think our winning of the Masonic Peace Memorial competition, and the carrying out of this great work, was the cornerstone of his career.

He always had very definite views and was autocratic in many ways—perhaps I might almost say, like many others, he had something of a dual personality; away from the office he seemed to throw aside much of what seemed to many something of hardness and severity, and revert to a natural quality of softness of heart and general good fellowship which endeared him to so many.

Up to three or four weeks before his death he was full of life and energy and ideas for the future, and he seemed to have entirely recovered from his recent illness; he had no thought of retiring, indeed he looked forward to years of enjoyment in the work which was the great interest of his life.

Only a short time before his death he told me he could wish for no better end than to die at work in his chair—I think he has had that wish, or very nearly so.

T. H. B. SCOTT *[F.]*

Mr. G. N. Kent writes:

A fortunate chance made me a colleague of T. H. B. Scott in the office of the late R. L. Curtis. He was senior assistant, I one of the juniors. At that time the multi-storied schools for the East Ham Education Authority were going through the office, some Roman Catholic schools, and a church, and St. Andrew's Hospital at Dollis Hill, of which only the central block, with its fine dome, and the eastern wing, are built.

One day, during this happy time, I took my camera to the office and photographed the members of the staff. It was during the next week that "T.H.B." brought some photographs to the office for us to see.

They were his first prints, and of course they became, at once, the subject of a storm of good-natured criticism. None of us, on that morning so long ago, could even have imagined that one day he would become the president of the Royal Photographic Society. Seven of the photographs in *Our Building Inheritance* by W. H. Godfrey are from Scott's camera.

When Mr. Curtis died, "T.H.B." succeeded to the practice, and soon afterwards his son, T. G. B. Scott, who later became his partner, went into the office as a junior.

There came to them a long succession of Roman Catholic churches, presbyteries and schools.

The schools were the usual utilitarian buildings, but the churches—beautiful design, in brick, and so many of them, all leading on to the last and, in my opinion, the finest of them all, the church at Muswell Hill.

The beauty, the dignity, of the work here is most impressive. What a joy it must have been for the craftsmen who were privileged to work on it. These churches were usually adorned by a piece of simple, but very beautiful, sculpture by his friend Lindsay Clark, A.R.B.S. He designed the 1914-1918 War Memorial for the Belgian Army at Kensal Green Cemetery, and the late King Albert made him a Chevalier de l'Ordre de Leopold II (Belgium).

"T.H.B." worked with amazing speed: he liked to work at home in the evening, drawing to 1/16th scale with remarkable accuracy for an ageing man. In making surveys he could see the relation of succeeding floors of an intricately planned building almost at once, and at the end of an afternoon he would have a set of beautifully drawn, freehand, plans which would superimpose. At the end of one very successful afternoon, when he was making reference plans for a report, I asked him if he had measured any of the work. "Yes," he said, with his slow lazy smile, "with my umbrella." He insisted on extreme accuracy of draughtsmanship, he liked to have the course lines shown on the 1/8th scale elevations; if the spacing of two contiguous lines was rather "wild" he would say, "Are we to have purpose made bricks for these courses?"

He was a Roman Catholic, and to add the prefix "devout" would be a banality in his case. His religion was in his every action, but he very seldom spoke of it, and only his closest friends had any idea of the depth and sincerity of his faith.

But do not imagine an austere ascetic; he was light-hearted, gay, and whimsical, with a bright and sparkling wit.

When war came, he closed his office at Westminster, and "T.H.B." went home to Brentwood to do the intermittent work of a Regional Architect for Historic Buildings, and to take photographs for the National Buildings Record.

Benjamin Walker, F.S.A. *[F.]*

We greatly regret to record the death of Mr. Benjamin Walker, who took a leading part in the cultural affairs of architecture in Birmingham.

Mr. Walker was a member of the Birmingham and Five Counties Architectural Society, his outstanding interest being in the development of the Association's library, the growth of which has been largely due to his interest; he was chairman of the Library Committee and later honorary librarian.

Mr. Walker was a vice-president of the Birmingham Archæological Society and had been a member since 1890; he contributed many articles to the Society's Transactions, including valuable records of many parts of Birmingham.

Notes

Revision of the 1939 Standard Form of Contract

The Joint Contracts Tribunal have revised Clause 25 of the 1939 Standard Form of Contract which was issued in July, 1939, and the new contract is now available to members.

Members who have copies of the July, 1939, Form in their possession may obtain from the Secretary of the R.I.B.A. copies of the revised Clause 25 for insertion in the standard form in order to bring it up to date and in accordance with the latest revision.

The Form of Contract for use by local authorities, issued in September, 1939, is also being revised and it is hoped that copies of this form will very shortly be available.

Code for the Measurement of Building Work in Small Houses

The Chartered Surveyors' Institution and the National Federation of Building Trades Employers decided, early in 1944, to explore the possibility of evolving some simpler method of measurement for the superstructures of small dwelling-houses, a decision which proved to be in line with the Report of the Central Council of Works and Buildings issued in November 1944.

A special Joint Committee has now completed its work and a "Code for the Measurement of Building Work in Small Dwelling Houses" has been prepared which has received the approval of the two bodies.

The Joint Committee for the Standard Method of Measurement of Building Works has accepted responsibility for the issue of the Document and copies will be obtainable at the price of five shillings post free from the Chartered Surveyors' Institution, 12 Great George Street, Westminster, S.W.1.

Town and Country Planning Refresher Course

It is proposed to open a full-time day course in Town and Country Planning in October 1945. The course will be of twelve weeks' duration and will be held at the School of Planning, 34-35 Gordon Square, London, W.C.1. (Euston 2158.)

This short course is designed primarily for men and women in the Forces who have satisfactorily completed the War Office Correspondence Course in Town and Country Planning (Class A), or who have passed the Intermediate Examination of the Town Planning Institute, or who hold a Certificate in Town Planning from a Recognised School and who—on demobilisation—are eligible for Government grants.

The course is recognised by the Town Planning Institute, and successful completion, including an oral examination conducted by an external examiner appointed by the Town Planning Joint Examination Board, will lead to Associate Membership of the Institute, subject to a period of practical experience.

The course will also be open, as far as places are available, as a "refresher" course for planners, architects, engineers and surveyors who are fully qualified in this country or in any allied country and to members of the American and Dominion Forces with suitable qualifications. In certain cases, the Town Planning Joint Examination Board may approve such students for examination.

Journal Index and Bindings

The fifty-second volume of the third series of the JOURNAL will be completed with the next, the October, issue. Members are reminded that the Index is published separately but will be sent without further request to all who received it last year: those who wish to receive it for the first time this year are asked to apply to the Editor.

Bound volumes will be supplied on similar terms to those prevailing last year. A detailed note will be published in the next number.

Architectural Association Scholarships

The Council of the Architectural Association has announced the award of the following Scholarships in Architecture for 1945, tenable at its School of Architecture:—

Entrance Scholarships

The Minter Open Entrance Scholarship (value £75), Miss J. R. Butler, of Redditch.

The Sir Walter Lawrence Open Entrance Scholarship (value £75), Hugh C. Morris, of Marlow.

The Metal Window Scholarship (presented by The British Metal Window Manufacturers' Association, Ltd. (value £75 per annum), Anthony J. Ault, of Gloucester.

The Pilkington Scholarship (presented by Messrs. Pilkington Bros., Ltd.) (value £75 per annum), Lyndon G. Harris, of Halesowen.

The E.J.M.A. Scholarship (presented by the English Joinery Manufacturers' Association) (value £75), John A. C. Higgins, of Hemel Hempstead.

The Natural Asphalte Council Scholarship (presented by The Natural Asphalte Mine-owners' and Manufacturers' Council) (value £50 per annum), Brian V. West, of Pershore, Worcs.

The Northern Aluminium Scholarship (presented by The Northern Aluminium Company) (value £50 per annum), John S. Ambrose, of Norwich.

The Cement & Concrete Association Scholarship (presented by Cement & Concrete Association) (value £50 per annum), J. Bainbridge Copnall, of London.

The Patent Glazing Scholarship (presented by the Patent Glazing Conference) (value £50 per annum), Miss E. M. D. Grimwade, of Croydon.

SENIOR ENTRANCE SCHOLARSHIPS

The Metal Window Senior Scholarship (presented by the British Metal Window Manufacturers' Association, Ltd.) (value £50 per annum), Wm. F. Mullins, of Leyton.

The British Plywoods Scholarship (presented by The Association of British Plywood Manufacturers) (value £50 per annum), Miss M. K. W. Reader, of Sutton, Surrey.

DATES OF THE FORTHCOMING R.I.B.A. EXAMINATIONS

Intermediate Examination

9, 10, 12, 13 and 15 November 1945. (Last day for receiving applications: 29 September 1945.)

24, 25, 27, 28 and 30 May 1946. (Last day for receiving applications: 27 March 1946.)

8, 9, 11, 12 and 14 November 1946. (Last day for receiving applications: 23 September 1946.)

Final Examination

5, 6, 7, 8, 10, 11 and 13 December 1945. (Last day for receiving applications: 27 October 1945.)

3, 4, 5, 6, 8, 9 and 11 July 1946. (Last day for receiving applications: 23 May 1946.)

4, 5, 6, 7, 9, 10 and 12 December 1946. (Last day for receiving applications: 23 October 1946.)

Special Final Examination

5, 6, 7, 8, 10, 11 and 12 December 1945. (Last day for receiving applications: 27 October 1945.)

3, 4, 5, 6, 8, 9 and 11 July 1946. (Last day for receiving applications: 23 May 1946.)

4, 5, 6, 7, 9, 10 and 12 December 1946. (Last day for receiving applications: 23 October 1946.)

Examination of Licentitates to Qualify for Candidature as Fellows

5, 6, 7, 8 and 10 December 1945. (Last day for receiving applications: 13 October 1945.)

3, 4, 5, 6 and 8 July 1946. (Last day for receiving applications: 10 May 1946.)

4, 5, 6, 7 and 9 December 1946. (Last day for receiving applications: 10 October 1946.)

Examination for Building Surveyors

1, 2 and 3 May 1946. (Last day for receiving applications: 15 March 1946.)

9, 10 and 11 October 1946. (Last day for receiving applications 28 August 1946.)

MEMBERS SERVING WITH THE FORCES

KILLED

BATT, BERTRAM [*A.*], Capt. R.E.
COURTNEY-LAVER, L. [*S.*], Pilot Officer R.A.A.F.
MCKAY, CRAWFORD [*S.*], Capt. R.E.
SUSSKIND, A. J. [*S.*], S/Sgt. R.E.
WARR, C. W. [*L.*], Capt. R.E.
WOOD, GEORGE [*A.*], 2nd Lieut. R.E.

REPATRIATED PRISONERS OF WAR

FLURY, B. R. [*S.*], Sgt/Obs. R.A.F.
SANDS, D. O., D.S.O., D.F.C. [*A.*], Sqdn. Ldr. R.A.F.

DISTINCTIONS AND DECORATIONS

ARCHIBALD, R. M. [*A.*], Capt. R.E. Mentioned in Despatches.
BARBARY, P. J., M.B.E. [*S.*], Major R.A. Awarded the G.M.
BELL, JAMES, M.B.E. [*A.*], Major R.E. Mentioned in Despatches.
EVERSON, S. F. [*A.*], Capt. R.E. Mentioned in Despatches.
FORBES, JOHN [*A.*], Capt. R.E. Mentioned in Despatches.
FORD, H. H. [*A.*], Major R.E. Mentioned in Despatches.
FULLER, A. R. [*S.*], Capt. R.A. Mentioned in Despatches.
GARDNER, THOMAS [*L.*], Lieut. R.N.V.R. Awarded the M.B.E.
GRAY, M. C. [*A.*], Major R.E. Awarded the M.B.E.
JERRAM, C. J., D.S.C. [*A.*], Lieut. R.N.V.R. Awarded the D.S.O., Bar to D.S.C. Mentioned in Despatches.
LOMAX, A., M.C. [*A.*], Sqdn. Ldr. R.A.F. Mentioned in Despatches.
OAKES, C. ST. C. [*A.*], Major R.A. Awarded the M.B.E. and T.D.
PARSONS, L. H. [*A.*], Major R.E. Mentioned in Despatches.
REDKNAP, P. H. [*A.*], Capt. R.E. Mentioned in Despatches.
REED, ALAN [*A.*], Capt. R.E. Mentioned in Despatches.
REMNANT, E. A. [*F.*], Major R.E. Awarded the T.D.
SARJEANT, J. K. G. [*A.*], Capt. R.E. Mentioned in Despatches.
STEPHENS, P. E. [*A.*], Major R.A. Awarded the T.D.
STOUT, G. R. [*A.*], Major R.E. Mentioned in Despatches.
TOMALIN, R. R. [*A.*], Lieut. R.E. Mentioned in Despatches.
TOOLEY, C. E. [*S.*], Lieut. R.N.V.R. Awarded the D.S.C.
TOWNROW, S. [*A.*], Capt. R.E. Mentioned in Despatches.
WAKEHAM, P. O. G. [*A.*], Brigadier. Mentioned in Despatches.
WARREN, R. L. [*S.*], Lieut. R.E. Awarded the M.C.
WHITING, B. T. [*A.*], Capt. R.E. Mentioned in Despatches.

MINISTRY OF WORKS LIBRARY

NEED FOR TRADE LITERATURE

The Ministry of Works Library is establishing a central collection of trade literature for reference by the technical officers of the Ministry. Manufacturers are invited to supply two copies of catalogues and like material on House and Building Equipment, Building Materials, Plant and Machinery. They should be addressed to Librarian, Ministry of Works, Lambeth Bridge House, London, S.E.1.

Competitions

COLOMBO CATHEDRAL COMPETITION

The Colombo New Cathedral Committee, in association with the Standing Committee of the Diocesan Council of the Church of Ceylon, invites architects who are qualified members of the Royal Institute of British Architects or allied bodies to submit in competition designs for the proposed Cathedral of The Holy Cross, together with Bishop's House, Divinity School, Diocesan Hall and Offices, in Colombo, on a site adjoining Buller's Road in that city. The competition is being organised by the Royal Society of Arts, London, on behalf of the Colombo New Cathedral Committee.

Assessor : Sir Giles Gilbert Scott, O.M., R.A. [*F.*].
Premiums : £500 ; £200 ; and £100.
Last day for submitting designs : 31 December 1946.
Last day for questions : 28 February 1946.

Conditions of the competition may be obtained on application to The Secretary, The Royal Society of Arts, 6 John Adam Street, Adelphi, London, W.C.2. Deposit £1.

THE "THISTLE FOUNDATION" COMPETITION

The Promoters invite architects of nationality other than enemy or ex-enemy to submit designs in competition for an establishment for the housing and treatment of severely disabled ex-Service Scottish officers and men.

Assessor : Mr. A. Graham Henderson, A.R.S.A. [*F.*].
Premiums : £500, £250, £150.

Applications for the conditions should be addressed to Messrs. Graham, Smart & Annan, C.A., Hon. Secretaries, The Thistle Foundation, Ltd., 22 Charlotte Square, Edinburgh, 2.

Last date for sending in designs 31 October 1945.

COMPETITION RESULT

BALLYOWEN, CO. DUBLIN SANATORIUM COMPETITION

1. John G. Manahan [*A.*] and L. G. Peppard [*A.*] (Dublin).
2. Nicol Nicol & Thomas [*A.*] and D. G. Walton [*A.*] (Birmingham).
3. D. Dex Harrison [*A.*] and Miss P. Whiting (London).
4. The Grenfell Baines Group of Architects (Preston, Lancs.).

Highly Commended : O'Connor & Aylward (Dublin).
Commended : Dermot O'Toole (Dublin).

Notices

New R.I.B.A. Award in Town Planning

R.I.B.A. Distinction in Town Planning

The R.I.B.A. have instituted the R.I.B.A. Distinction in Town Planning, which is obtainable by Fellows, Associates and Licentiates who are not less than 26 years of age. The test by means of which this Distinction is awarded will be conducted by a special Board of Examiners appointed by the Council of the R.I.B.A.

This new award does not take the place of the R.I.B.A. Diploma in Town Planning, which is obtainable by Fellows, Associates and Licentiates of the R.I.B.A. without any minimum age limit.

The primary purpose of the new award is to satisfy a demand from senior architects to take a qualifying test in town planning suited to their age and existing attainments.

The Examiners will meet three times a year—in February, May and October. Applications should be submitted to the Acting Secretary of the R.I.B.A. by 1 January, 1 April and 1 September, annually.

Copies of the form of application containing the procedure, regulations, general scope of study and bibliography may be obtained, free, on application to the Secretary, R.I.B.A.

Associates and The Fellowship

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the next election they should send the necessary nomination forms to the Secretary R.I.B.A. as soon as possible.

Architectural Competitions

ASSESSORS' AWARDS

All architects who take part in architectural competitions are reminded by the Council of the R.I.B.A. that participation in a competition is a definite acceptance of the principle that the award of the assessor is final and binding upon themselves as well as upon the promoters, and that any competitor who feels that he has real ground for dissatisfaction with an assessor's award should communicate with the Secretary of the R.I.B.A.

Further, all architects, whether competitors or otherwise, are reminded that discussion or correspondence in the public or professional Press which tends to criticism or disparagement of an assessor or award cannot alter the final and binding effect of the award, but may prejudice architects and the whole competition system in the opinion of the public, and is, therefore, highly undesirable.

Members' Column

APPOINTMENTS

Lieut.-Colonel Alexander Cullen, O.B.E., F.S.I., M.T.P.I., R.I.B.A. Dist. Town Planning [*F.*], has been appointed Architect and Town Planning Officer to the County Council of Inverness. His address is: County Buildings, Ardross Street, Inverness.

Mr. H. T. Jackson [*F.*], the Head of the Building Department, Blackpool Technical College, has been released from the Army and will be pleased to receive trade data and information sheets on matters relating to the Architectural and Building Courses.

Mr. Harold G. Ellis, B. Arch. [*A.*], having taken up the appointment of Architect to the Urban District Council of Hornchurch, will be pleased to receive trade catalogues, etc., addressed to: The Architect, Hornchurch Urban District Council Offices, Billet Lane, Hornchurch, Essex.

Mr. E. Coleman Hicks [*A.*] has been appointed deputy to Mr. Walter Wood [*F.*], practising at 9 Court Road, Delhi, India, and would be pleased to receive trade catalogues, etc.

Major G. G. Pace [*A.*] has been appointed Superintending Valuer, [Dilapidations] Lands Branch, War Office, Middlethorpe Lodge, Dringhouses, York, and would like to receive trade catalogues, etc.

PRACTICES AND PARTNERSHIPS

Mr. J. K. Hicks [*F.*], A.A.Dip., has entered into partnership with Mr. E. C. Scherrer, M.A. [*F.*]. The firm will be known as Messrs. Scherrer & Hicks, Remo House, 310-312 Upper Regent Street, London, W.1. (Telephone Langham 2991.)

Percy Howard [*F.*], of 88 Mosley Street, Manchester, has entered into partnership with Eric S. Benson, M.B.E. [*F.*] and they will practice at the same address as Howard & Benson.

Mr. H. C. Hughes, M.A. [*F.*], and Mr. Peter Bicknell, M.A. [*F.*], have reopened their office at 1 Tunwell's Court, Trumpington Street, Cambridge. Telephone: Cambridge 3978.

Mr. Niel Martin-Kaye [*F.*] and Mr. C. Warren Neil [*A.*] having entered into partnership will conduct practice at 43 Doughty Street, London (Tel. Hol. 7112) and 10 Mint Street, Lincoln (Tel. Lincoln 478), under the title "Martin-Kaye & Warren Neil." Trade catalogues, samples, etc., would be appreciated at either address.

Mr. Herbert W. Matthews [*F.*], of 10 Manchester Square, London, W.1, will be pleased to receive trade catalogues.

Mr. Harry Sherwood, O.B.E. [*F.*], has now resumed his practice at 11 West Pallant, Chichester, Sussex, and will be glad to receive trade catalogues, information sheets, etc., when available.

Mr. Gerald Stanley [*F.*], P.A.S.I., has resumed practice at 100 St. Mary Street, Cardiff (Cardiff 5159). Trade catalogues and circulars are invited.

Mr. Francis W. B. Yorke [*F.*], Chartered Architect, 36 Calthorpe Road, Edgbaston, Birmingham, 15, has taken into partnership Mr. Horace Minns Barker [*L.*]. The practice will be continued from the same address under the style Francis W. B. Yorke & H. M. Barker [*F/L.*].

Mr. C. W. Bodie [*A.*], P.A.S.I., would be pleased to receive information sheets and catalogues (with particular reference to housing) at "Heathside," Hassall Road, Alsager, Stoke-on-Trent.

David Booth [*A.*] and Judith G. Ledeboer [*A.*] have resumed practice at 3 Southampton Place, London, W.C.1 (Holborn 8040), and will be glad to receive trade catalogues.

Mr. Thomas D. Esplin, B. Arch. [*A.*], has resumed practice at 28 Bond Street, Sydney, New South Wales, Australia.

Associate, at present in the Forces and wishing to acquaint himself with present-day materials and methods of construction, would be pleased to receive trade catalogues, information sheets, etc. Address: C. North [*A.*], "Frankwyn," London Road, Amesbury, Wilts.

Captain Frederick Howard Allen [*L.*] (late R.E.s), formerly in Practice in Cheltenham and Plymouth has acquired the practice of the late Mr. A. S. Parker [*F.*] of 1 St. Andrew Street, Plymouth, under the style of "A. S. Parker & Allen." Captain A. S. Parker's grandson, at present on War Service, will be returning to this office in the near future.

MR. C. D. BOOTHROYD [*L.*] has been released rom duty with the War Department and has resumed practice (formerly carried on under the name of H. H. Clingh) at Old Market Chambers, Yorkshire Street, Lancs., where he will be pleased to receive trade catalogues, etc.

MR. R. STEWART [*L.*], having been released from Government service, has now resumed active practice at his old address, Brundrit & Stewart, County Square, Ulverston, Lancs., and will be pleased to receive recent trade catalogues, etc. (Tel. Ulverston 43.)

PRACTICES AND PARTNERSHIPS WANTED AND FOR DISPOSAL

FELLOW, long experience (English and Colonial) recently released from war work desires partnership or a position with a view thereto in a well-established firm, preferably in Southern Counties. Capital available.—Apply Box 136, c/o The Secretary, R.I.B.A.

F.R.I.B.A., with country practice, immediately requires the services of a qualified assistant with view to early partnership to the right man. Southern County. State age, qualifications, education, experience and salary required to Box No. 137, c/o The Secretary, R.I.B.A.

ASSOCIATE, age 38, discharged from H.M. Forces, previously in practice on own account, seeks partnership or position as assistant with firm covering Ashford, Folkestone or Canterbury districts. Experienced domestic design.—Apply Box No. 132, c/o The Secretary, R.I.B.A.

ASSOCIATE, S/L R.A.F., 31 years old, wishes to obtain partnership or position with view to partnership in established practice in S.W. England. Capital available.—Apply Box No. 129, c/o The Secretary, R.I.B.A.

ASSOCIATE wishes to purchase small established practice in or near London or possibly in South of England. Would consider partnership. Apply Box 130, c/o The Secretary, R.I.B.A.

ASSOCIATE, A.A.Dipl., wishes to communicate with firm or group of architects view partnership or senior appointment leading to same. Experience contemporary work and control modern London offices. Age 40. At present serving abroad (R.E. officer), due demob. September.—Apply Box 131, c/o Secretary, R.I.B.A.

ASSOCIATE seeks assistantship with view to partnership in Midlands, 16 years' good general experience.—Apply Box No. 139, c/o The Secretary, R.I.B.A.

ASSOCIATE, M.A. and Dip.Arch. (Cambridge), aged 33, at present Major R.E., due for release in November, desires partnership or position with view to future partnership with established architect in provinces. S. Counties preferred. Ten years' experience in general practice. Capital available.—Apply Box No. 138, c/o The Secretary, R.I.B.A.

ASSOCIATE with own provincial practice and extensive London connection seeks partnership with early succession in London. Would purchase existing practice outright.—Apply Box No. 146, c/o The Secretary, R.I.B.A.

ASSOCIATE (39), fully experienced, own practice interrupted by war, now commencing to revive, seeks partnership with live practice possibly by way of chief assistantship for short time before purchase of equal partnership. Would purchase outright practice of retiring member. London area.—Apply Box 144, c/o The Secretary, R.I.B.A.

ASSOCIATE, experienced, now released from war service, seeks senior post with view to partnership with established London architect; capital available.—Box No. 142, c/o Secretary, R.I.B.A.

MEMBER [*A.*], age 44, recently released, wishes to purchase partnership in established practice in London or Southern Counties, or would consider chief assistantship with a view to partnership.—Box No. 143, c/o Secretary, R.I.B.A.

SPECIAL SERVICES

ASSOCIATE, Dip. Arch. (Major R.E.), specialising in perspective work, offers services to architects, England and Northern Ireland. Own studio.—Apply Box No. 123, c/o The Secretary, R.I.B.A.

MEMBERS RELEASED FROM THE SERVICES, ETC.

THE following members have notified the R.I.B.A. that they are resuming practice and would like to receive trade catalogues, information sheets and other data, etc.:

MR. TONY BRANSON [*A.*], 72 Victoria Street, S.W.1.

MR. STANLEY A. COMBEN [*A.*], 603/5 Kenton Road, Kenton, Harrow, Middlesex [Wordsworth 1181].

MAJOR KENNETH DALGLIESH, R.E. [*F.*] (Dalgliesh & Pullen [*F.*]). Temporary offices, 9 Victoria Street, Westminster, S.W.1. (Abbey 4415-6).

MR. HENRY DARSA [*L.*], 59a Connaught Street, Hyde Park Square, W.2 (Tel. Pad. 9867).

MR. E. W. FOUNTAIN [*A.*] the City Surveyor's Dept., Town Hall, Leicester. Trade catalogues, etc., to The Vineries, Cosby, Leicester.

CAPTAIN W. HARKNESS, R.E. [*F.*] (Ford & Harkness, *F./F.*), 25 Victoria Street (South Block), Westminster, S.W.1 [Abbey 3103]. Until further notice he is living at Wainui, Limmer Lane, Felpham, Bognor Regis [Middleton-on-Sea 144].

MAJOR S. C. HURST [*L.*], P.A.S.I., 11 Knoyle Road, Preston Park, Brighton, 6.

MR. W. D. IRONSIDE [*A.*] Water Farm, Stowting, Ashford, Kent.

Mr. H. T. JACKSON [*F.*], The Red House, Staverton, Northants.

MAJOR FRANK W. KNIGHT, R.E. [*F.*], Fountain Court, Middle Temple, E.C.4.

MR. FRANK SCARLETT [*F.*], 38 Downshire Hill, London, N.W.3.

MR. RAGLAN SQUIRE [*F.*] (ARCON), 81 Piccadilly, W.1, as a partner in the business.

MR. MICHAEL TAPPER, M.C., F.S.A. [*F.*]. 1 St. Leonards Terrace, S.W.3. (Tel. Sloane 3237).

MR. N. F. WOODROFFE, O.B.E. [*F.*], 5 Bedford Row, London, W.C.1.

CHANGE OF ADDRESS

THE partners of Searle & Searle, Norman O. Searle, L. Keir Hett, E. C. Kent and J. C. Casey, have moved their offices to Amen House, Warwick Square, E.C.4. (Telephones City 1639 and 1630). Cecil J. Searle is in the office of the City Architect, Hull, Yorks. David O. Searle is shortly expected at Amen House.

ACCOMMODATION

R.E. OFFICER [*L.*], recommencing practice, urgently requires office accommodation in Central or N.W. London area. Would consider sharing with another.—Apply, Box 140, c/o The Secretary, R.I.B.A.

OFFICE accommodation required in London by Architect [*L.*], recommencing practice. One, two or three rooms, Victoria or City preferred.—Apply, Box No. 141, c/o The Secretary, R.I.B.A.

MEMBER requires office accommodation in London. Two or three rooms.—Apply Box No. 134, c/o Secretary, R.I.B.A.

ASSOCIATE requires small room in London architect's office with use of telephone.—Apply Box No. 135, c/o Secretary, R.I.B.A.

WANTED

MEMBER wishes to purchase a copy of Macey's *Specifications in Detail*.—Write to Mr. W. G. Norris, Estate Department, W. H. Smith & Son, Ltd., Strand House, London, W.C.2.

Will any member please undertake to forward used copies of "The Architects' Journal" weekly on payment of postage to Major D. H. S. Prince, R.E., Threeways, Felpham, Sussex, who has recently returned from four years' service overseas and whose subscription cannot at present be accepted.

FOR SALE

MEMBER, retiring, has for disposal two plan-chests, drawing board, T square, and books.—Particulars on application to Box No. 133, c/o The Secretary, R.I.B.A.

THEODOLITE (Troughton & Simms), old but excellent condition, in mahogany box with plumb bob, etc., tripod and telescopic levelling staff.—Enquiries to Miss M. N. Clarke, Lindley, Salisbury Road, Farnborough, Hants.